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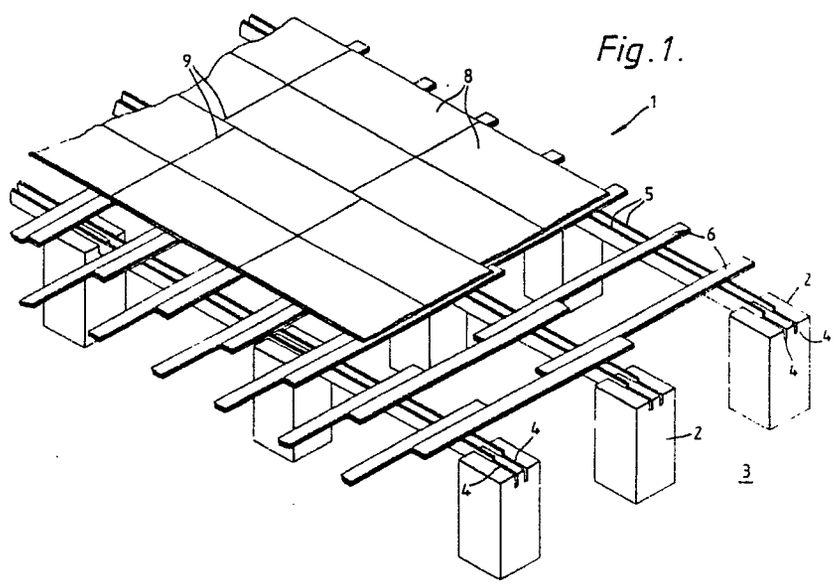
(54) A platform.

(57) A platform, particularly for use as a builder's or decorator's staging comprises support elements (2) formed of expanded polystyrene which rest on the floor without damaging the floor. Extending between the support elements(2) there are horizontal support members(5) in the form of vertical or 'on edge' planks, on which rest further horizontal planks (6) which support plywood or chipboard panels (8) which form the stage. The lower edges of the vertical or "on edge" planks(5) are received in grooves-(4) formed in the support elements(2).

Fig.1.



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A platform

THE PRESENT INVENTION relates to a platform. One embodiment of the invention particularly relates to a working platform or stage primarily intended for use by builders and/or decorators. Whilst the invention will be described with reference to this primary application it should be appreciated that the platform may have other applications. For example, the platform may be used as a stage by actors. Another embodiment of the invention may comprise a permanent fixture to be incorporated in a building.

It is sometimes necessary to erect a platform or stage for use by builders or decorators, the platform or stage being erected inside a building. Typically such a platform or stage may be constructed on a supporting framework formed from conventional scaffolding tubes and couplers, or formed from scaffold frames. Whilst such a framework may be satisfactory in use, the scaffolding tubes or the scaffold frames may damage the floor upon which the stage or platform is erected. This is clearly inconvenient, especially if the floor is a screeded floor which is subsequently to be tiled, or if the floor is a woodblock floor.

The present invention seeks to provide a platform or stage which can be erected without damaging the under-lying floor.

The invention also seeks to provide a staging or platform that can be assembled quickly, at a low cost.

According to this invention there is provided a platform, said platform comprising a plurality of support elements engaging an under-lying floor, a plurality of support members extending between the support elements, the support members supporting directly or indirectly a plurality of panels constituting the upper surface of the said platform, the support elements having at least the part thereof engaging the under-lying floor made from a yieldable material.

Preferably the yieldable material comprises an expanded or foamed plastics material.

Conveniently the yieldable material comprises expanded polystyrene.

Advantageously each support element is made as an integral element formed of said yieldable material.

Preferably each support element comprises one or more components located one on top of the other, at least the lowest component being formed entirely of said yieldable material.

Conveniently the support elements define a substantially regular square array, and the support members comprise first members extending between support elements defining rows of said elements, and transverse support members resting thereon, the sheets forming the surface of said platform resting on the said transverse support members.

Preferably the joints between adjacent sheets which extend parallel to said transverse support members are located immediately above selected ones of said transverse support members.

Advantageously the transverse support members comprise planks or scaffolding boards.

Conveniently each transverse support comprises two superimposed planks or scaffolding boards.

Preferably the said first support members comprise planks or scaffold boards retained in a vertical or "on edge" condition.

Conveniently each support element is provided with at least one groove formed in the upper surface thereof, the groove receiving an edge portion of a said plank or scaffold board.

Preferably each support element is provided with two parallel grooves formed in the upper surface thereof, each receiving an edge portion of a respective plank or scaffold board.

The invention also relates to a platform structure comprising a plurality of platforms as described superimposed one on the other.

In order that the invention may be more readily understood, and so that further features thereof may be appreciated, the invention will now be described, by way of example, with reference to the accompanying drawings in which

FIGURE 1 is a perspective view of a platform or stage in accordance with the invention when partly erected,

FIGURE 2 is a perspective view, corresponding to Figure 1, showing an alternative form of platform or stage, and

FIGURE 3 is a perspective view showing a multi-layered platform in accordance with the invention, with parts thereof cut away for the sake of clarity of illustration.

Referring to the drawings a platform or stage 1 in accordance with the invention comprises a plurality of supporting elements 2 which rest upon an under-lying floor 3. The elements 2 form a regular square array.

The supporting elements in the presently described embodiment of the invention, each comprise a single block of a rigid but yieldable expanded or foamed plastics material. A suitable material is expanded polystyrene, but other materials having similar properties may be utilised.

Each element 2 is of regular parallelipidic form. Two parallel transverse grooves or slots 4 are

formed in the upper face of each block. The blocks in each row of blocks are aligned so that the grooves 4 in the upper faces thereof are co-aligned. Wooden planks or scaffold boards 5 are inserted edge-wise into the slots 4 to act as support members. Each plank 5 is substantially vertical. Each plank 5 may extend between two adjacent blocks in the row or may even extend across three or four blocks in the row.

It will be appreciated that there are corresponding rows of planks 5, each in a vertical orientation, extending along the rows of elements 2.

Further wooden planks or scaffold boards 6 may be located extending transversely across the tops of the rows of vertical planks 5. The planks 6 may be located in super-imposed pairs. The horizontal planks 6 extending between the adjacent rows of vertical planks 5 may be staggered.

Finally panels or sheets 8 of plywood, chipboard or other similar material may be located on top of the horizontal planks 6. It may be necessary for these panels to be staggered slightly, as shown at 9, in view of the stagger of the under-lying supporting planks 6. It is to be appreciated that each join between the panels 8 parallel to the axis of the planks 6 should actually lie immediately over the centre of a plank 6.

It is to be appreciated that the positioning of the elements 2 may be adjusted within wide limits, but preferably the positioning is such that the elements 2 are able to withstand the load that is to be supported by the platform 1. If the platform is to carry a heavy load the elements 2 should be relatively close together. However, if the platform is only to carry a relatively light load, then the elements 2 may be further apart.

Whilst the invention has been described with reference to an embodiment in which vertical planks 5 extend between the blocks, it is to be appreciated that the supporting members extending between the elements 2 may comprise timber, steel or aluminium beams. It is not essential for these support members to be recessed into grooves in the elements in any way, and thus in certain embodiments, the transverse slots 4 may be omitted.

Figure 2 illustrates an embodiment of the invention which is similar to that illustrated in Figure 1, and like reference numerals apply to like parts.

However, it will be seen that in the embodiment illustrated in Figure 2 each element 2 rests on top of another under-lying block 10, with the block 10 resting upon the floor 3. The block 10 is made of expanded polystyrene. The the platform of Figure 2 is located higher above the floor than is the platform of Figure 1. It is to be appreciated that the dimension of the elements 2 and the blocks 10 in the vertical direction may be selected to provide a platform having any desired height above the under-lying floor 3.

In use of the described embodiments of the invention the platform or stage may be readily erected in a room of any size. Since the support elements 2 (and the blocks 10) are formed of expanded polystyrene, the load bearing parts of the platform or stage, as represented by the lower parts of the elements 2 and the blocks 10 which actually touch the floor, are of a yieldable material. Thus the stage or platform will not damage an under-lying floor, even if the floor is delicate, such as a woodblock floor.

Figure 3 is a perspective view illustrating a modified embodiment of the invention in which a first platform assembly 11, as described with refernce to Figure 2, rests upon the floor 3, and a second platform assembly 12 rests upon the platform assembly 11.

The lower-most blocks 10 of the platform assembly 12 may have pairs of transverse grooves 13 formed thereon, to engage the upper edges of the planks 5, thus relatively rigidly inter-connecting the upper platform assembly 12, and the lower platform assembly 11. Alternatively the lower-most blocks 10 of the upper platform assembly 12 may have planar under-surfaces 14, without transverse grooves, and the planar under-surfaces 14 will then just rest on the panels or sheets 8 of the lower platform assembly 11.

It will be appreciated that a multi-layer platform can be produced using these techniques. Such a platform may comprise a permanent fitting within a building.

Whilst the invention has been described by way of example it is to be appreciated that modifications may be effected without departing from the scope of the following Claims.

Claims

1. A platform, said platform comprising a plurality of support elements(2) engaging an under-lying floor(3), a plurality of support members(5) extending between the support elements, the support members supporting directly or indirectly a plurality of panels(8) constituting the upper surface of the said platform, characterised in that the support elements (2) having at least the part thereof engaging the under-lying floor(3) made from a yieldable material.

2. A platform according to Claim 1 wherein the yieldable material comprises an expanded or foamed plastics material.

3. A platform according to Claim 2 wherein the yieldable material comprises expanded polystyrene.

4. A platform according to any one of the preceding Claims wherein each support element(2) is made as an integral element formed of said yieldable material.

5. A platform according to Claim 4 wherein each support element comprises one or more components(2,10) located one on top of the other, at least the lowest component being formed entirely of said yieldable material.

6. A platform according to any one of the preceding Claims wherein the support elements-(2,10) define a substantially regular square array, and the support members comprise first members-(5) extending between support elements defining rows of said elements, and transverse support members (6) resting thereon, the panels(8) forming the surface of said platform resting on the said transverse support members(6).

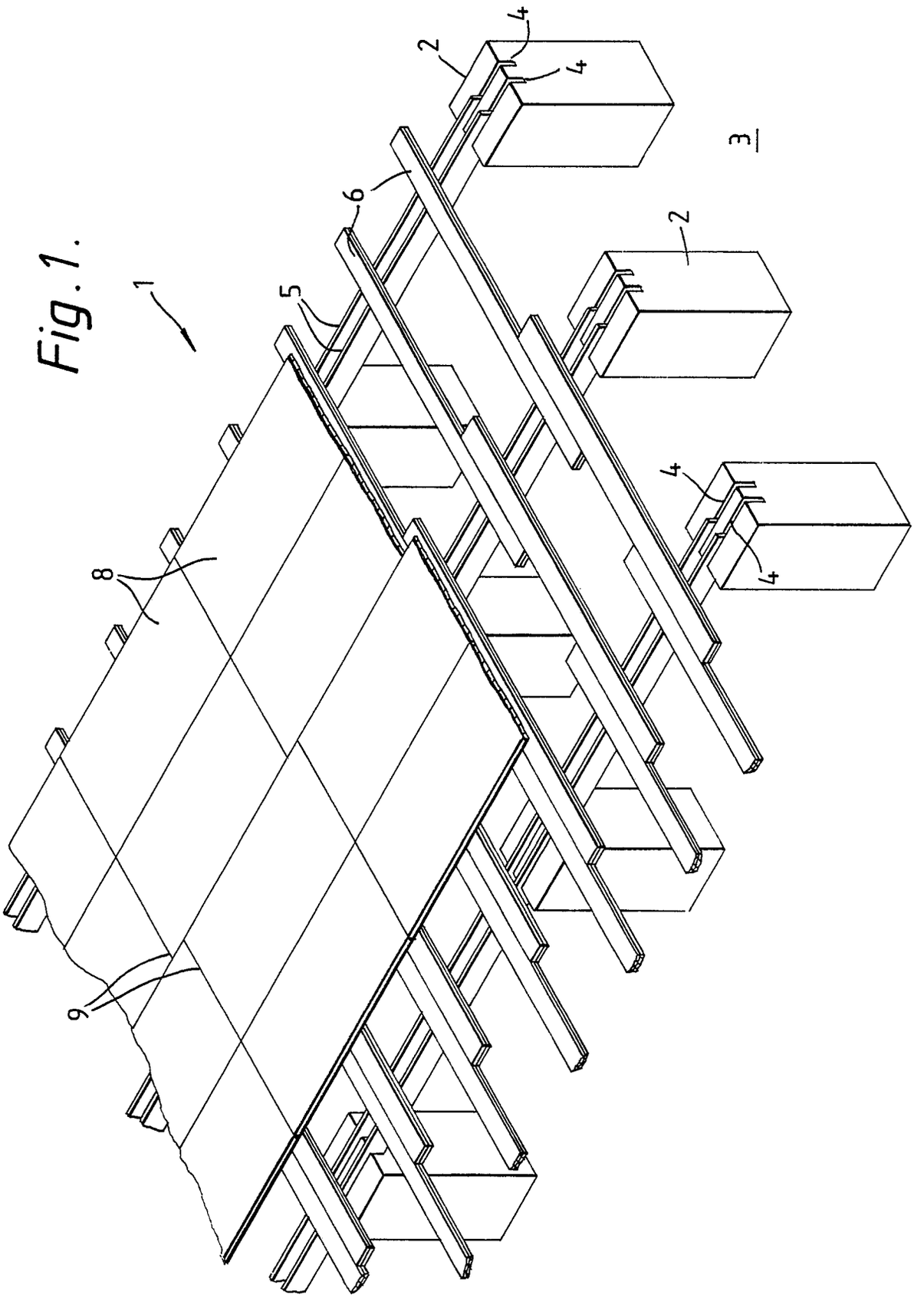
7. A platform according to Claim 6 wherein the joints between adjacent panels(8) which extend parallel to said transverse support members(6) are located immediately above selected ones of said transverse support members(6).

8. A platform according to Claim 6 or 7 wherein the said first support members(5) comprise planks or scaffold boards retained in a vertical or "on edge" condition, each support element(2) being provided with at least one groove(4) formed in the upper surface thereof, the groove receiving an edge portion of a said plank or scaffold board(5).

9. A platform according to Claim 11 wherein each support element(2) is provided with two parallel grooves(4) formed in the upper surface thereof, each receiving an edge portion of a respective plank or scaffold board(8).

10. A platform structure comprising a plurality of platforms(11,12) according to any one of the preceding Claims, superimposed one on the other.

Fig. 1.



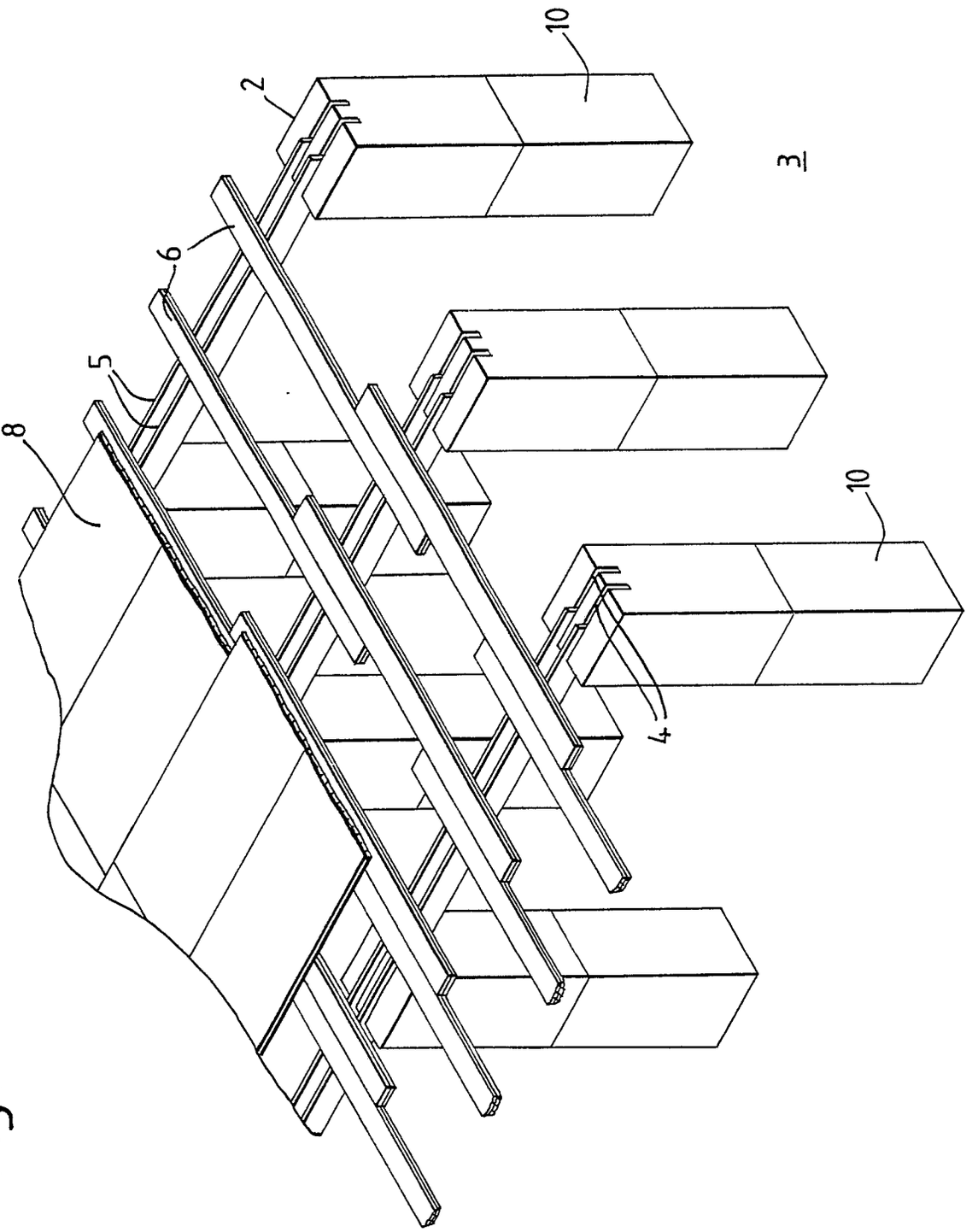
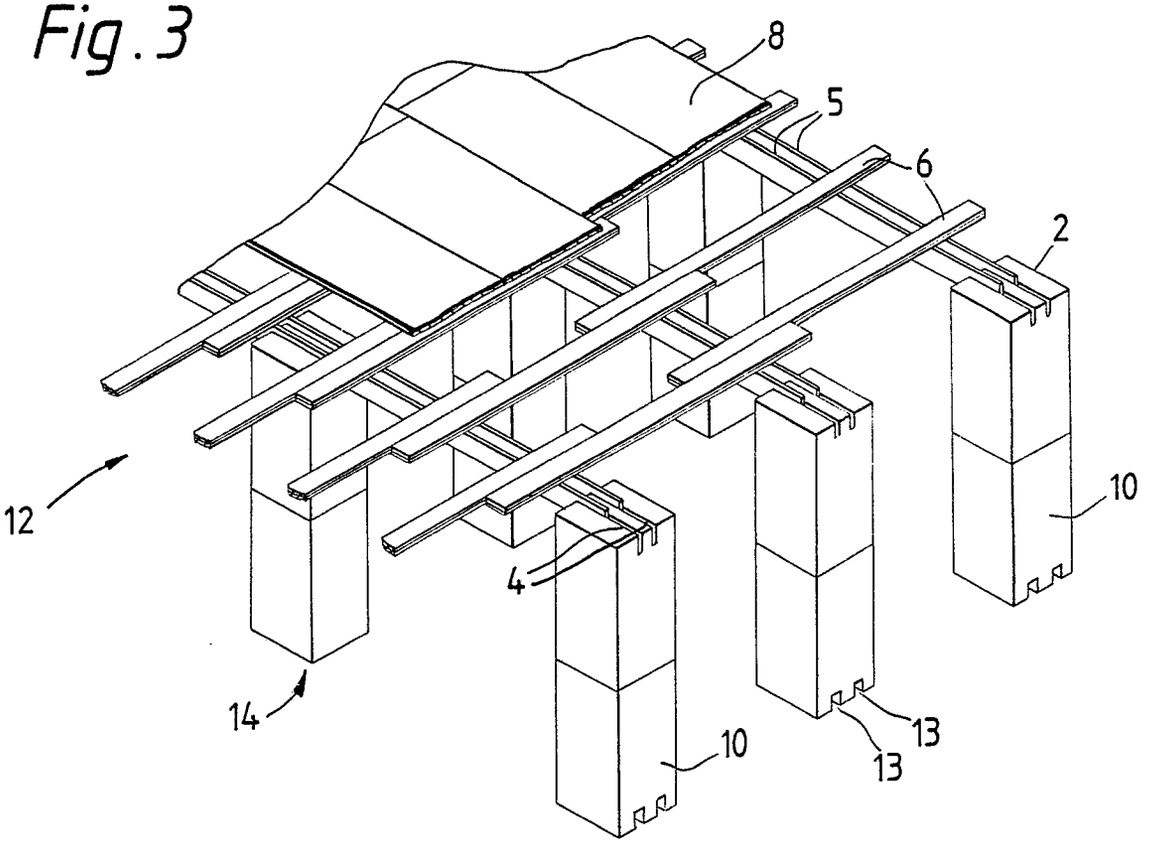
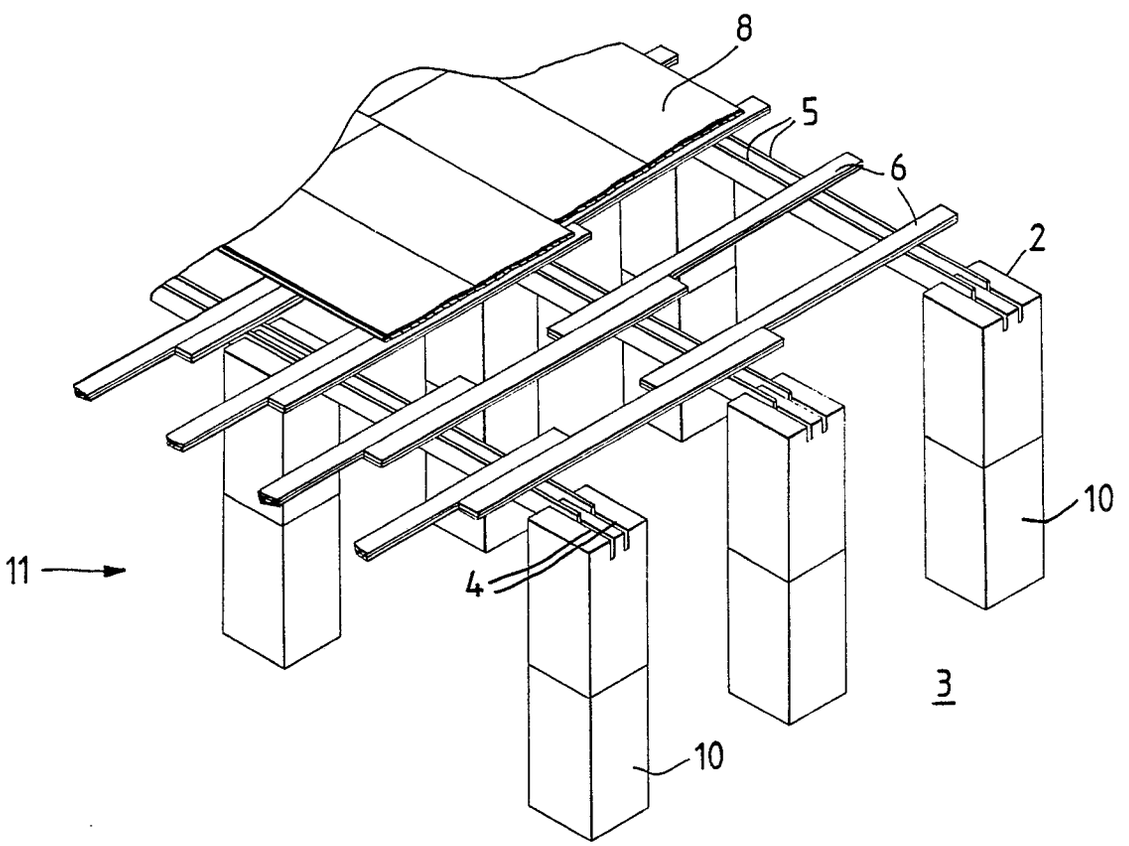


Fig.2.

Fig. 3





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European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 30 8444

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	DE-A-2 314 463 (W. STAUDENMAYER) * Page 4, paragraphs 4-5; page 5, paragraphs 1-3; figures 1,2,5-7 *	1,4,6	E 04 F 15/02 E 04 H 3/24
Y		2,3,5,8-10	
Y	GB-A-2 126 265 (CONTIWOOD LTD) * Page 1, lines 101-105; claims 1,3; figures 2,3 *	2,3,5	
Y	GB-A-1 340 037 (R.W.S. HARVEY) * Page 4, lines 105-116; figure 11 *	7	
A		1	
Y	GB-A- 822 738 (S. KERMODE) * Page 1, lines 15-23,61-78; figures 1,3,4 *	8,9	
Y	GB-A-2 197 357 (G.B. DODSON) * Page 3, lines 11-39; figures 1,6,7 *	10	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

E 04 H 3/00
E 04 F 15/00
E 04 G 3/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	27-11-1989	KAPPOS A.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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