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London EC1M 5SA (GB)**(54) **Temporary guard rail**

(57) When assembling scaffolding, operatives stand at ground level or on a previously assembled deck, to fit the transoms, ledgers and deck of the next level, in order to fit a guard rail for the next level, they have to stand on the deck at that level and, without a guard rail, they are required by Health and Safety procedures to wear a safety harness and to clip it to the scaffolding. The harness is uncomfortable to wear; It is expensive to buy one for each operative, especially since they require periodic replacement; and the procedure is time consuming and unpopular.

A temporary guard rail is disclosed, comprising a frame having an upper rail member supported by stanchions. The frame has clips by which it can be attached to a permanent guard rail at one level and to the ledger of the next level up from said one level, to locate said

rail member above the deck of the next level up to act as a guard rail. Once the transoms, ledgers and deck have been fitted for the next level up, the temporary guard rail can be fitted from the present level and before the operative ascends to the next level up, so that when s/he does ascend, the guard rail is already there and there is no need to use a safety harness. At the next level up, the permanent guard rail can be fitted, the temporary guard rail can be demounted and used for the (new) next level up. Once assembly is complete, the temporary guard rails can be used on the next job; they may be made robustly so as to outlast safety harnesses and they are needed in numbers to suit the scaffolding being erected, not one per scaffolder.

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Description

[0001] This invention relates to a structures which comprise standards joined by transoms and ledgers at one or more levels, a deck at the or each level resting on the transoms and a permanent guard rail joining the standards at each level.

[0002] An example of such a structure is scaffolding and the invention will be explained against the background of practice in the scaffolding industry, although the reader may readily think of other applications for the invention.

[0003] When assembling scaffolding, operatives stand at ground level or on a previously assembled deck, to fit the transoms, ledgers and deck of the next level, in order to fit a guard rail for the next level, they have to stand on the deck at that level and, without a guard rail, they are required by Health and Safety procedures to wear a safety harness and to clip it to the scaffolding. The harness is uncomfortable to wear; It is expensive to buy one for each operative, especially sing they require periodic replacement; and the procedure is time consuming and unpopular.

[0004] Against this background the invention provides a temporary guard rail, comprising a frame having an upper rail member supported by stanchions, the frame having clips by which it can be attached to a permanent guard rail at one level and to the ledger of the next level up from said one level, to locate said rail member above the deck of the next level up to act as a guard rail. Once the transoms, ledgers and deck have been fitted for the next level up, the temporary guard rail can be fitted from the present level and before the operative ascends to the next level up, so that when s/he does ascend, the guard rail is already there and there is no need to use a safety harness. At the next level up, the permanent guard rail can be fitted, the temporary guard rail can be demounted and used for the (new) next level up. Once assembly is complete, the temporary guard rails can be used on the next job; they may be made robustly so as to outlast safety harnesses and they are needed in numbers to suit the scaffolding being erected, not one per scaffolder. In this specification "permanent" is intended to mean that the guard rail is left fitted until the structure is dismantled and "temporary" that the guard rail may be used in erecting the scaffolding and removed once the "permanent" guard rail has been fitted.

[0005] Preferably the temporary guard rail is so formed as to space the stanchions and the rail member away from the standards above the ledger to which it is attached in use, in order to enable a permanent guard rail to be fitted to the standards.

[0006] The stanchions are preferably joined by one or more cross members in addition to the rail member.

[0007] In a preferred example, the clips are in the form of downwardly-open hooks.

[0008] The hooks to attach to the guard rail of one level, or the hooks to attach to the ledger of the next level

up preferably extend further than the hooks to attach to the other, so that the hooks which extend further can engage the guard rail or ledger before the other hooks engage the ledger or guard rail.

[0009] One embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a pictorial view of part of a scaffolding structure incorporating a temporary guard rail embodying the invention;

Figure 2 is a side view of the a temporary guard; and Figure 3 is a front view of the temporary guard rail of Figure 2.

[0010] Referring to the drawings, a scaffolding structure 2 is being erected against a wall 4 of a building. The principal components are standards 6, transoms 8, and ledgers 10, interconnected by scaffolding clips one of which is shown schematically at 12. The structure is braced by diagonal members 16 and decks are provided at each level by boards 16.

[0011] In Figure 1, there is shown a fully assembled first or ground level 18, a fully assembled second level 20 and a partly assembled next level up: level three. Ladders 24 interconnect the levels. In the construction of the second level 20, Two horizontal tubes 26 are clipped to the standards to act as guard rails. Until guard rails are fitted at a particular level, it is not conventionally permitted to work on that level without being clipped to the structure by a safety harness.

[0012] In order to avoid that requirement, a temporary guard rail 28 for the third level can be installed from the second level.

[0013] Referring to Figures 2 and 3, the temporary guard rail assembly 28 is provided in sectional assemblies 30. Each sectional assembly comprises two stanchions 32, spaced by a rail member 34, to act as a guard rail, and further cross members 36 of which two are illustrated.

[0014] Attached to each stanchion 30 are two clips in the form of hook members 38 spaced vertically sufficiently to engage both a permanent guard rail 26 and the ledger 10 of the next level up. The hook members 38 are dimensioned suitably to receive the 48.3 mm diameter tube of standard scaffolding pole which comprise the guard rail 26 and the ledger 10.

[0015] In use, once a scaffolder working, say on the second level 20 has fitted the ledgers 10 of the next level up, temporary guard rails for that level may be fitted, with the operative working on level two, by clipping the sectional assemblies 30 to the guard rail 26 at level two 20, and the ledger 10 for the next level up. Once the transoms 8 and the deck 16 for level three have been installed, the scaffolder may work at that level without the need for a safety harness. In order to allow the permanent guard rail to be fitted the rail member 34 and (at least) the upper part of the stantions 32 must be spaced

sufficiently from the standards 6. In the embodiment illustrated, this is achieved by a crank in the stantions.

[0016] On this level the scaffolder will install a permanent guard rail 26, transoms 8, ledgers 10 and deck 16 for the next (fourth) level and will then move the temporary guard rail up one level so as to be able to work on the fourth level without the need for a safety harness.

Claims

1. A temporary guard rail for use in assembling a structure, which structure comprises standards joined by transoms and ledgers at one or more levels, a deck at the or each level resting on the transoms and a permanent guard rail joining the standards at each level, said temporary guard rail comprising a frame having an upper rail member supported by stanchions, the frame having clips by which it can be attached to a permanent guard rail at one level and to the ledger of the next level up from said one level, to locate said rail member above the deck of the next level up to act as a guard rail.
2. A temporary guard rail as claimed in claim 1, so formed as to space the stanchions and the rail member away from the standards above the ledger to which it is attached in use, in order to enable a permanent guard rail to be fitted to the standards.
3. A temporary guard rail as claimed in claim 1 or 2, wherein the stanchions are joined by one or more cross members in addition to the rail member.
4. A temporary guard rail as claimed in any preceding claim, wherein the clips are in the form of downwardly open-hooks.
5. A temporary guard rail as claimed in claim 4, wherein the hooks to attach to the guard rail of one level, or the hooks to attach to the ledger of the next level up extend further than the hooks to attach to the other, so that the hooks which extend further can engage the guard rail or ledger before the other hooks engage the ledger or guard rail.

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FIG. 1

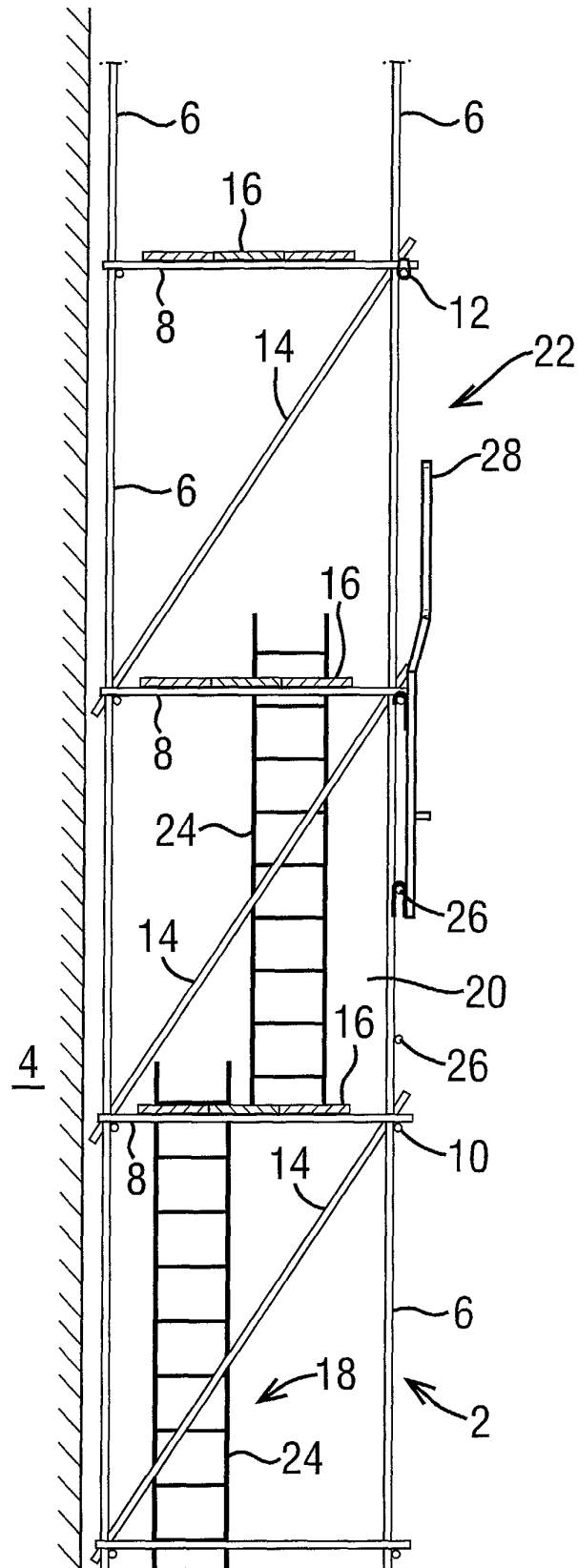


FIG. 2

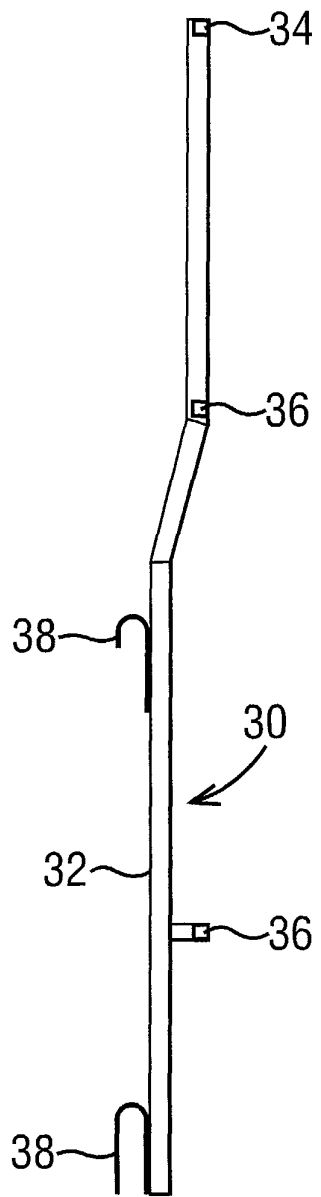


FIG. 3

