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(54) **Temporary staging system**

(57) A temporary staging system comprises a structural base and an array of substantially vertical struts extending from the base. The system includes at least

one panel shaped to form a working platform, the underneath of which is shaped and dimensioned to engage the array of struts.

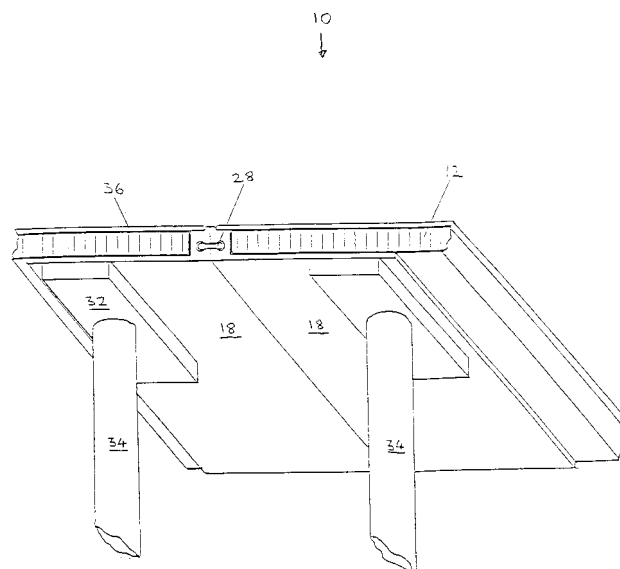


FIG 1

Description

[0001] The present invention concerns a temporary staging system.

[0002] According to the present invention, there is provided a temporary staging system, the system comprising a structural base; an array of substantially vertical struts extending from the base; at least one panel shaped to form a working platform, the underneath of which is shaped and dimensioned to engage the array of struts.

[0003] Preferably, support feet are connected to the free end of each of the struts and the underneath of the at least one panel is shaped and dimensioned to engage the array of support feet.

[0004] Preferably there are at least two panels in side by side alignment, the system additionally comprising interlocking means to facilitate the connection of adjacent panels.

[0005] More preferably, the at least one panel is a honeycomb panel.

[0006] Preferably, the substantially vertical struts are telescopic. More preferably, mounting brackets and support brackets are located beneath the or each panel and incorporate means to retain the support feet in operative association with the or each panel, thereby forming a load distributing configuration between the at least one honeycomb panel and the structural base.

[0007] Preferably, the mounting brackets are disposed about the entire perimeter of each honeycomb panel, thereby providing support at the edges of each said honeycomb panel. More preferably, the mounting brackets incorporate means for interlocking adjacent honeycomb panels. Even more preferably, the interlocking means comprises a pair of opposing substantially symmetrical channels housing a single interengaging member shaped and dimensioned for sliding engagement in the pair of opposing channels.

[0008] Further preferably, protective mats are provided to form a cover over the top side of the at least one honeycomb panel.

[0009] Advantageously, the support feet, mounting brackets, support brackets, interlocking means and honeycomb panels are interchangeable, thereby facilitating ease of assembly of the entire staging system.

[0010] There is also provided a kit of parts for a temporary staging system, comprising at least one panel, mounting bracket, support bracket, support feet, support strut, interengaging member, and protective mat.

[0011] The invention will now be described with reference to the accompanying drawings, in which:

Figure 1 illustrates a perspective view, from beneath, of a section of the temporary staging system showing two adjacent panels and associated interlocking means and support struts;

Figure 2 illustrates a plan view of a single honey-

comb panel showing associated mounting brackets and support brackets in hidden detail;

Figure 3 illustrates a sectioned elevation of Figure 2;

Figure 4 illustrates a sectioned elevation of the edge of a honeycomb panel, detailing the overlapping assembly of the top and bottom bonded layers;

Figure 5 illustrates an elevation of a mounting bracket;

Figure 6 illustrates an elevation of the interlocking means isolated from the associated mounting brackets;

Figure 7 illustrates an elevation of a support bracket.

[0012] Referring now to the accompanying drawings, there is illustrated a temporary staging system according to the present invention, generally indicated as 10, for use in any suitable application, particularly for temporary arrangements or where ease of assembly is a requirement. Figure 1 illustrates a perspective view, from beneath, of a pair of adjacent honeycomb panels 12, associated contiguous mounting brackets 18 and interlocking means 28. Figure 2 illustrates a plan view of a single panel 12, including peripheral mounting brackets 18 and a central support bracket 30 in hidden detail. The panel 12 comprises an aluminium hexagonal cell honeycomb core 14 (manganese as major alloying element) of rectangular plan sandwiched between a top side conductive epoxy layer 15 and a reverse side conductive lacquer layer 16, each being bonded to the respective faces of the honeycomb core 14. The top and bottom layers 15 and 16 respectively, are overlapped and bonded together at and to each of the side walls of the panel 12. This compound structure embodies good strength and stiffness to weight ratios along with high fatigue resistance, good vibration damping characteristics and non-combustibility, being ideal for stage platforms.

[0013] The panel 12 is supported along each of four sides by a single extruded mounting bracket 18 comprising various subsections each performing its own function. A base plate 20 engages the lower edge of the panel 12 along the entire length of the respective side of said panel 12, thereby providing lateral support for the panel 12. The underside of the base plate 20 incorporates fixing means (not shown) to locate and maintain a plurality of support feet 32 beneath and in contact with the mounting bracket 18. An upright ridge 22 ensures a secure fit between the mounting bracket 18 and the panel 12 and prevents movement of said panel 12 relative to the mounting bracket 18.

The upright ridge 22 also incorporates a keyhole section

channel 24 along the entire length of the mounting bracket 18. Therefore, contained within contacting adjacent mounting brackets 18 of two adjacent panels 12 will be formed a figure-of-eight type channel 24 to facilitate the insertion of a similarly shaped and dimensioned interlocking extrusion 28. The insertion of said interlocking extrusion 28 prevents, in use, the separation of any two adjacent mounting brackets 18 and consequently the associated panels 12.

[0014] Extending from the upper face of the upright ridge 22 is a raised lip 26, again extending along the entire length of the mounting bracket 18. The raised lip 26 facilitates the location and retention of a protective mat 36 on the upper surface of each of the panels 12.

[0015] Located centrally beneath and in contact with the underside of each panel 12 is an inverted U-shaped support bracket 30, being normally disposed between the two end mounting brackets 18 (Fig 2). The support bracket 30 also incorporates fixing means (not shown) to locate and maintain a plurality of the support feet 32 within the channel of the support bracket 30. Said support feet 32 comprise simple blocks incorporating means (not shown) to locate a support strut 34 and having the purpose of distributing the inherent stress developed between the panel 12 and vertical struts 34 due to external loading. Stop blocks 31 may be provided at the ends of the support brackets 30. Typically, the stop blocks comprise rectangular aluminium blocks, for example having a length of 44mm, a width of 20mm and a depth of 6mm. Such stop blocks prevent the honeycomb panels 12 from moving on the support brackets 30.

[0016] It will be appreciated that specific orientations of the base (not shown), support feet 32, mounting brackets 18 and support brackets 30 will result in specific forms of staging platform 10. It will also be appreciated that a plurality of each of the aforementioned components are utilised and are interchangeable with equal others, thereby facilitating quick and easy assembly of the support system. Furthermore, it will be appreciated that the base (not shown) can comprise any number of structural assemblies incorporating substantially telescopic vertically extending struts 34 for the purpose of connection to the support feet 32. In this way, the base is erected in the desired location and orientation and the support feet 32, mounting brackets 18 and support brackets 30 attached. Panels 12 are then located within the array of mounting brackets 18 and support brackets 30 to form a raised working platform.

[0017] The invention is not limited to the embodiment described herein, which may be amended or modified without departing from the scope of the present invention.

a structural base; an array of substantially vertical struts extending from the base; at least one panel shaped to form a working platform, the underneath of which is shaped and dimensioned to engage the array of struts.

2. A temporary staging system according to claim 1 wherein support feet are connected to the free end of each of the struts and the underneath of the at least one panel is shaped and dimensioned to engage the array of support feet.
3. A temporary staging system according to any preceding claim comprising at least two panels in side by side alignment and interlocking means to facilitate the connection of adjacent panels.
4. A temporary staging system according to any preceding claim wherein the at least one panel is a honeycomb panel.
5. A temporary staging system according to any preceding claim comprising mounting brackets and support brackets located beneath the or each panel and incorporating means to retain the support feet in operative association with the or each panel.
6. A temporary staging system according to claim 5 wherein the mounting brackets are disposed about the entire perimeter of the or each panel.
7. A temporary staging system according to claim 5 or claim 6 wherein the mounting brackets incorporate means for interlocking adjacent panels.
8. A temporary staging system according to claim 7 wherein the interlocking means comprises a pair of opposing substantially symmetrical channels housing a single interengaging member shaped and dimensioned for sliding engagement in the pair of opposing channels.
9. A temporary staging system according to any preceding claim comprising protective mats to form a cover over the top side of the at least one panel.
10. A kit of parts for a temporary staging system according to any preceding claim comprising at least one panel, mounting bracket, support bracket, support feet, support strut, interengaging member, and protective mat.

Claims

1. A temporary staging system, the system comprising

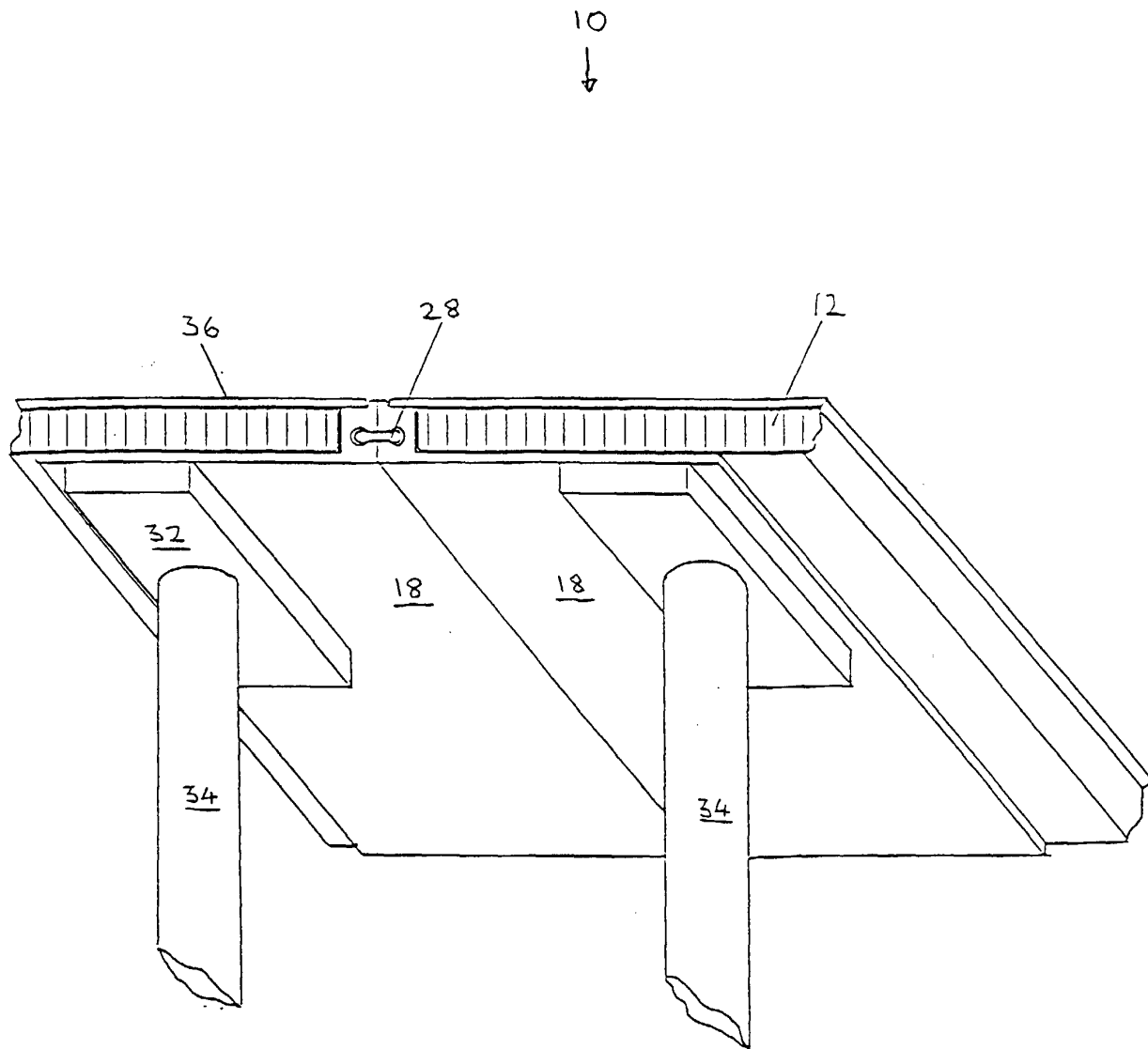


FIG. 1

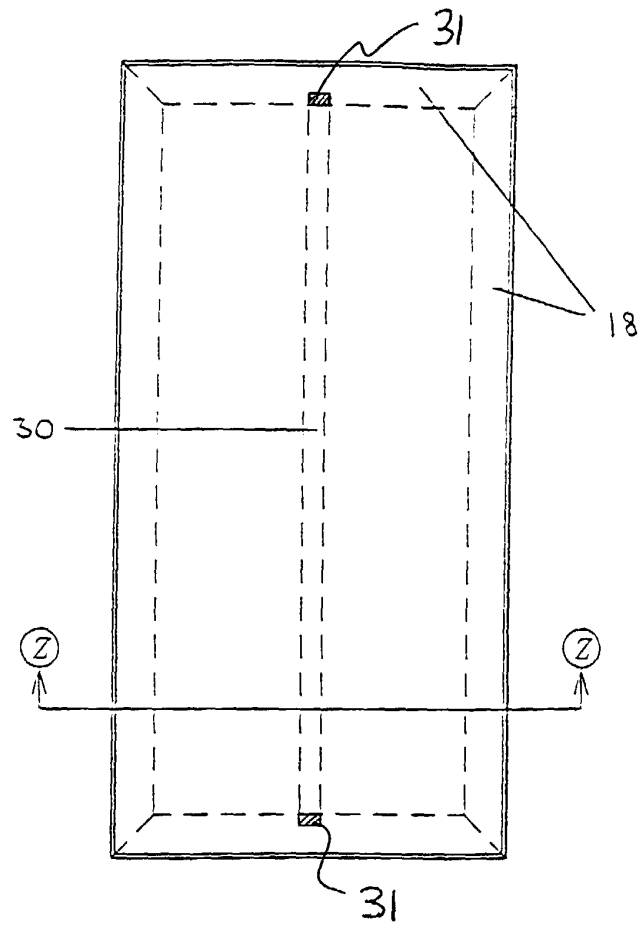


FIG 2

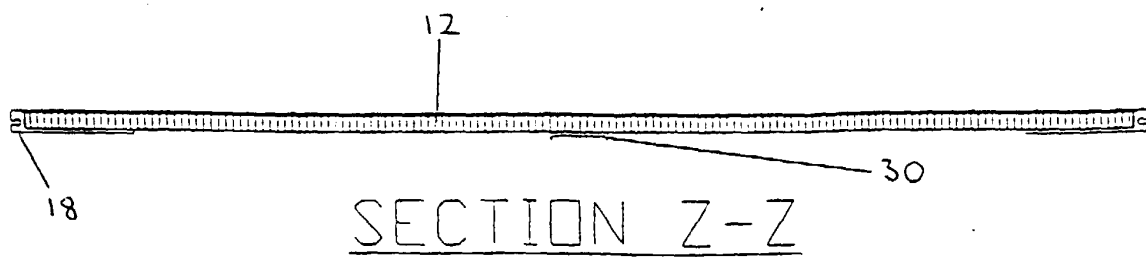


FIG 3

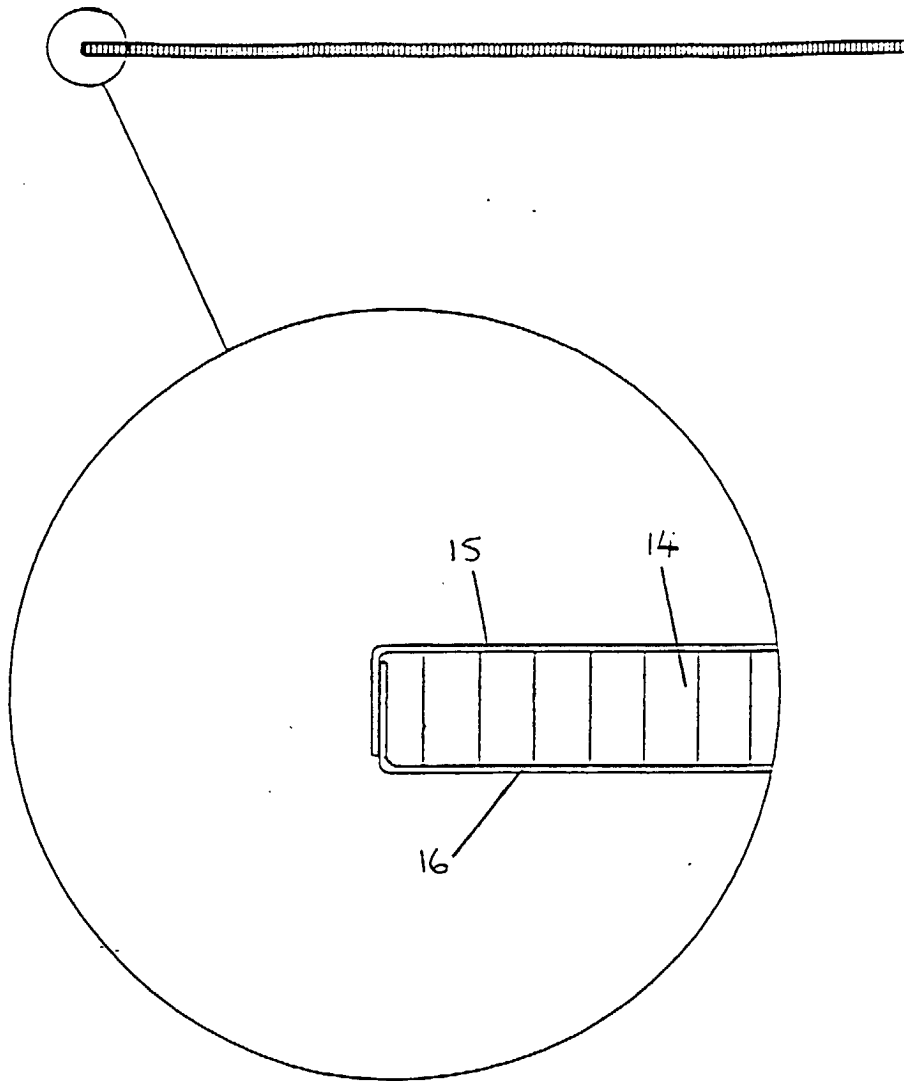


FIG 4

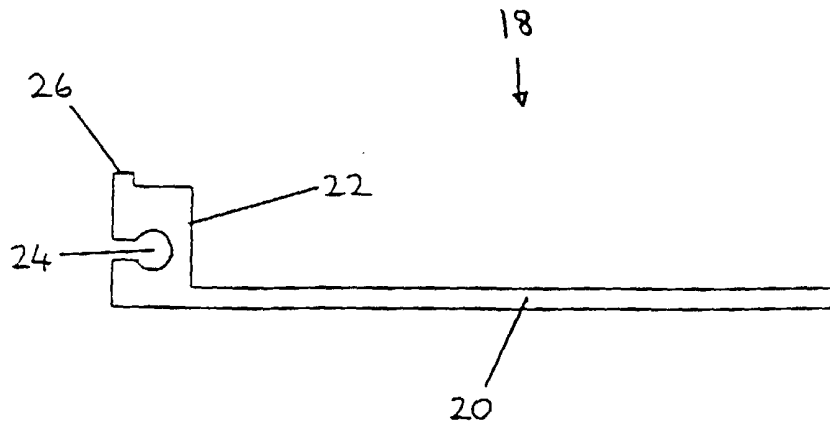


FIG 5

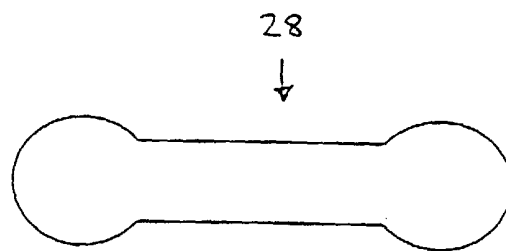


FIG 6

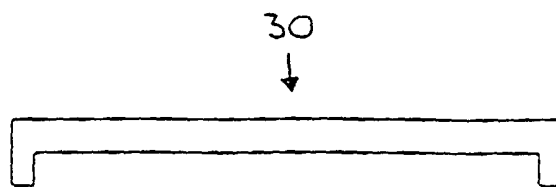


FIG 7