

(12) UK Patent Application (19) GB (11) 2 128 286 A

- (21) Application No 8327045
- (22) Date of filing 10 Oct 1983
- (30) Priority data
- (31) 827377
- (32) 8 Oct 1982
- (33) South Africa (ZA)
- (43) Application published 26 Apr 1984
- (51) INT CL³
E04B 1/54 E04C 2/46
- (52) Domestic classification
F2M 201 209 232 243
252 271 C1
U1S 1705 1707 F2M

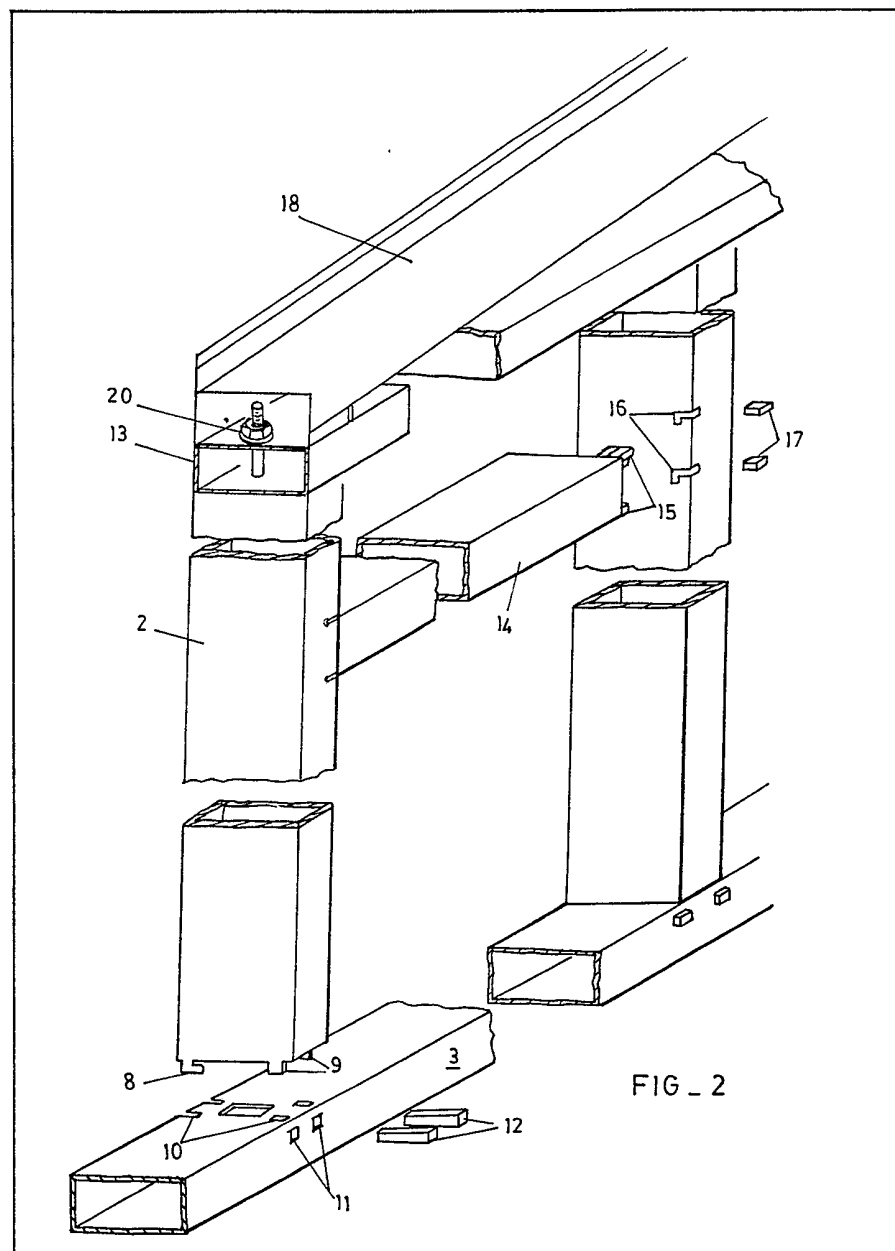
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- (58) Field of search
F2M
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(54) Building system

(57) A building system includes an assembly of vertical elongate members 2 and base rails 3 which are clad with panels. The vertical members 2 are hollow section metal members having tongues 8, 9 at their extremities for seating in cut outs 10 formed in the base rails 3. The

tongues are bent over to lock the vertical member 2 to the base rail 3 by the insertion of wedges 12 through holes 11. The panels for use with the beams comprise rectangular sheets which have slits for mating with overlapping panels in an edge to edge and overlapping relationship. The building system enables a structure to be ready built in modular form.



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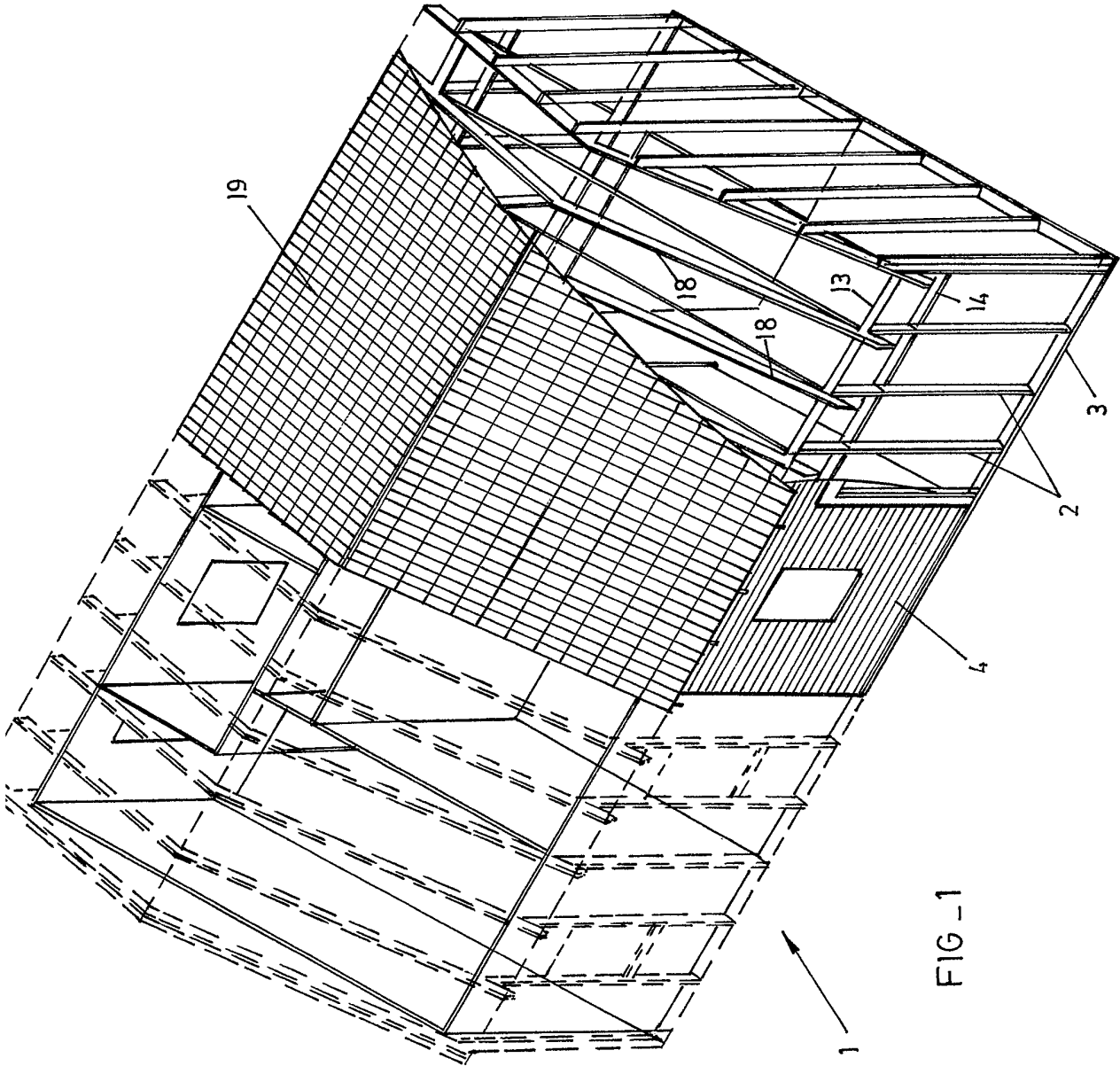


FIG -1

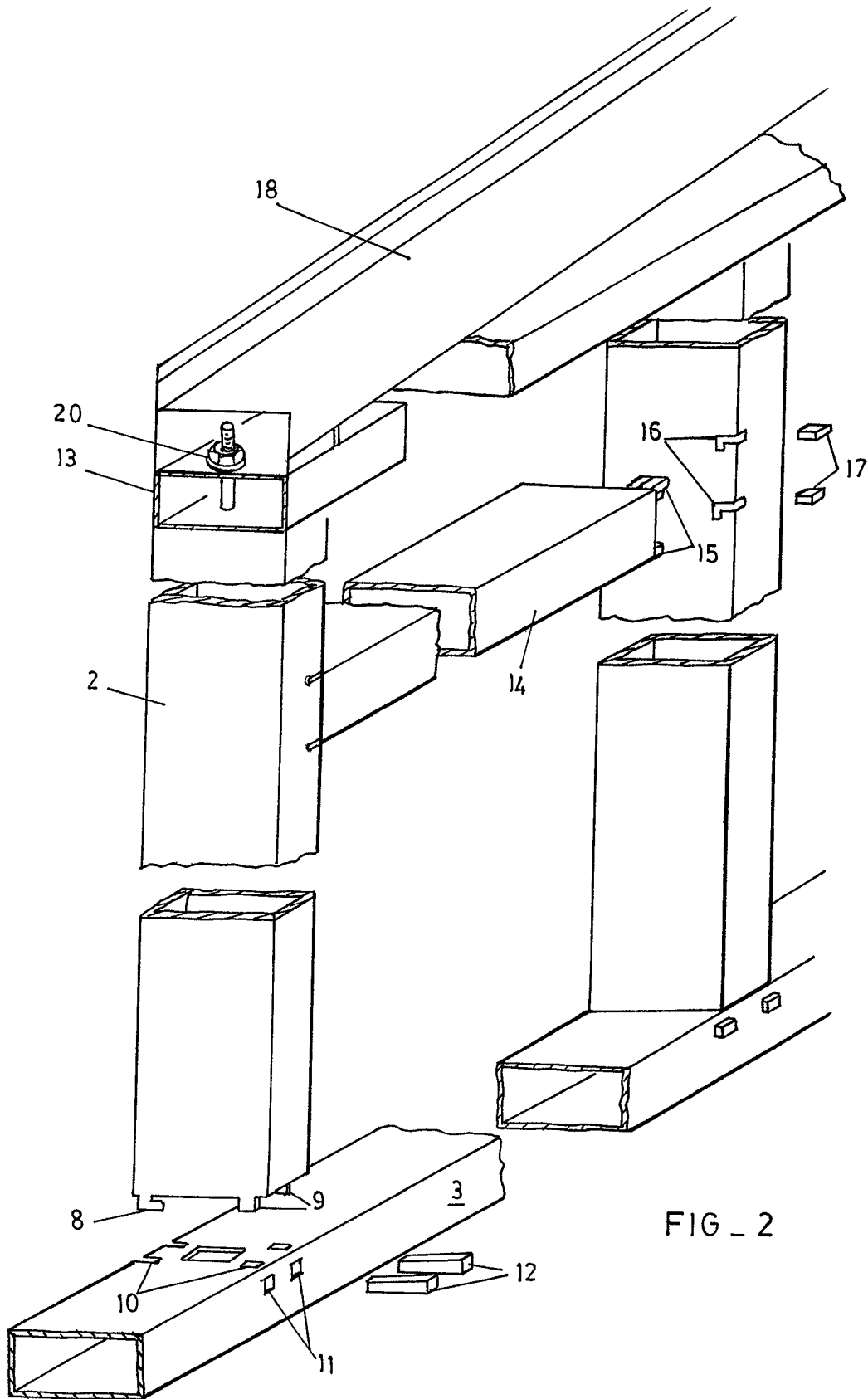


FIG - 2

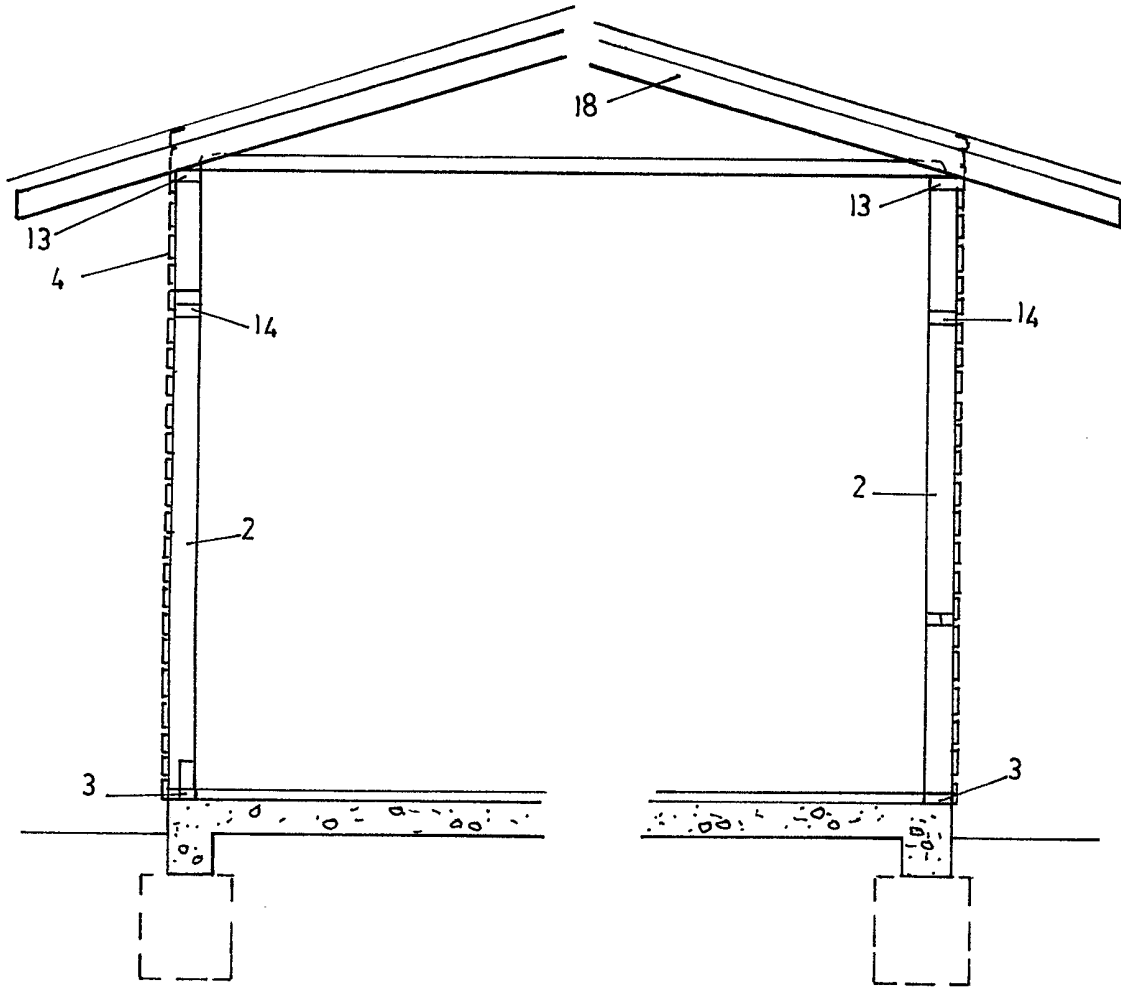


FIG _ 3

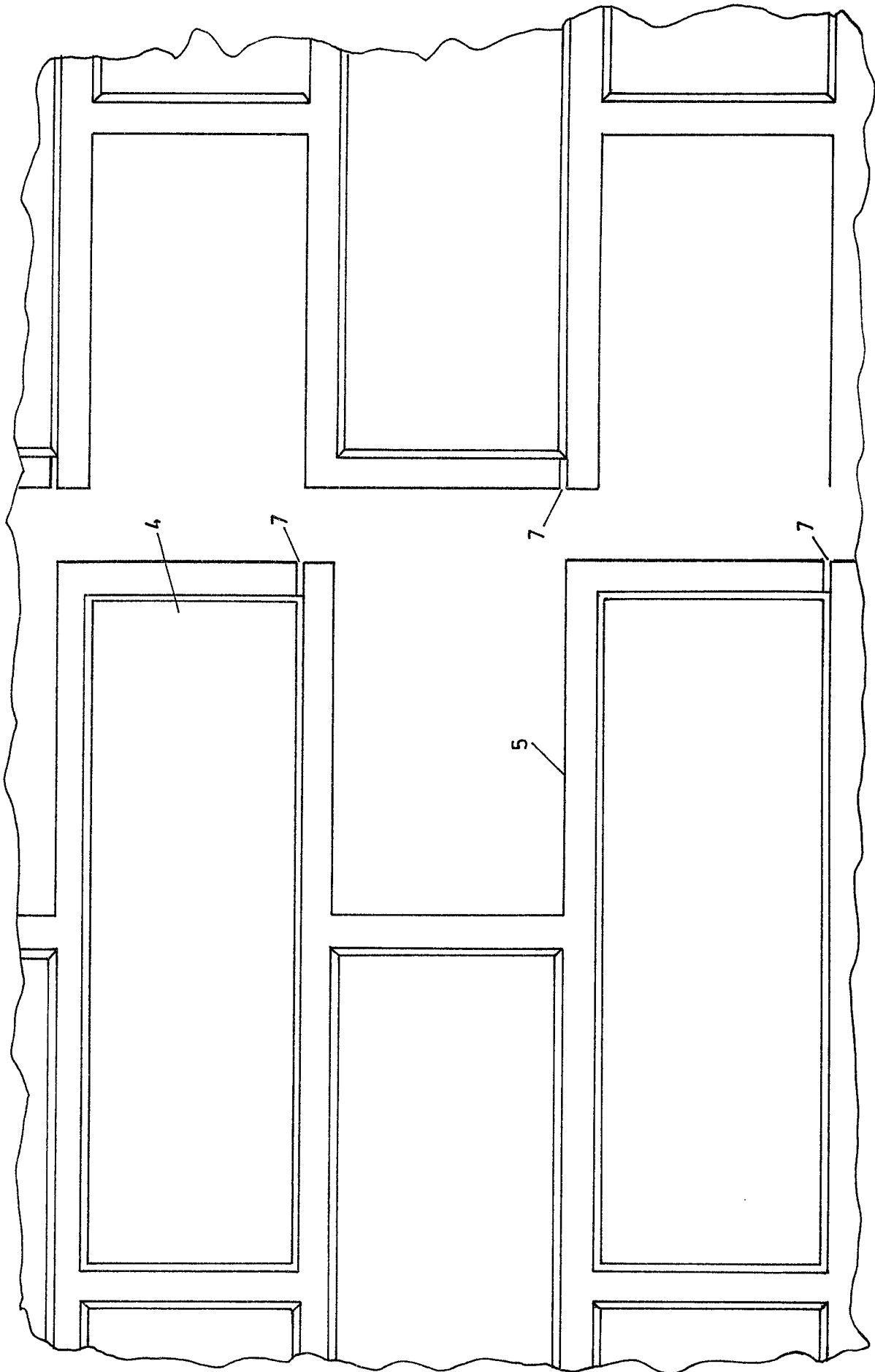


FIG - 4

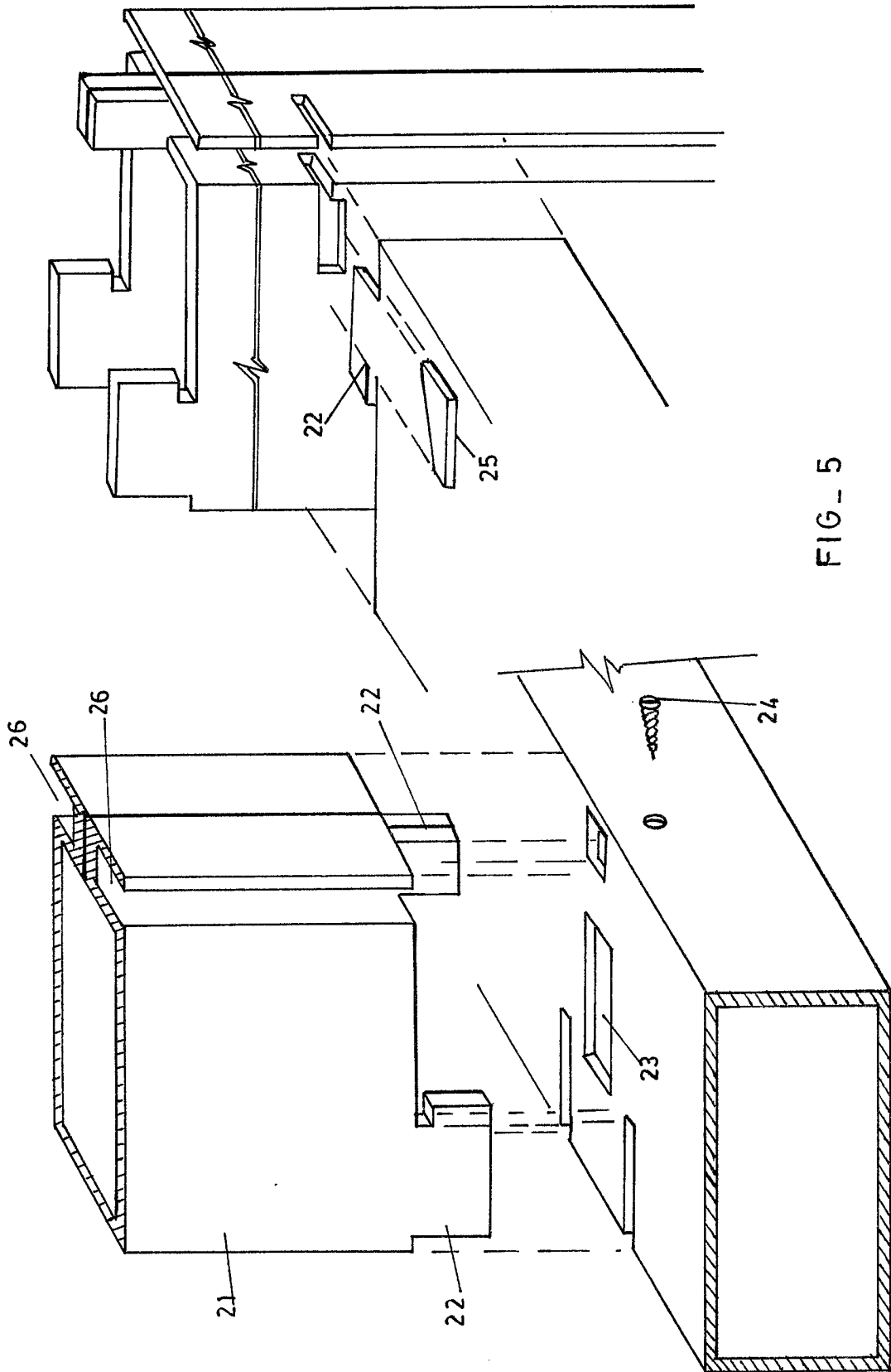


FIG. 5

SPECIFICATION
Building system

This invention relates to a building system and more especially to constructional elements for a building system.

The prior art is replete with various types of building systems and in a specification of this nature it is not possible to give any comprehensive review of such art.

It is an object of the invention to provide a building system which simplifies the construction of buildings.

According to the invention a constructional element includes a vertical elongated member adapted for anchorage on a base plate or a hollow body, the member including one or more formations for engagement with corresponding formations on the base plate or the hollow body and means to wedge one or more formations of the elongated member in its seating position on the base plate or the hollow body to lock the member thereto.

In a preferred form of the invention the formations on the vertical elongated member comprise projecting tongues and the corresponding formations in the base plate tube comprise grooves or bores for receiving the tongues. Preferably four projecting tongues are provided, each tongue being located at or near a corner of a square or rectangular section shaped elongated member.

The means for displacing the tongues from the seating position may comprise a wedge shaped block, a tapered screw or the like. Preferably the base plate tube is provided with a passage for directing the wedge which deforms the tongues into engagement with the base plate.

Preferably the elongated member and the base plate comprise hollow square or rectangular section beams formed from metal. The material for the beams and the cladding elements are preferably corrosion resistant.

According to another aspect of the invention there is provided a combination of the constructional element as described above together with a cladding panel adapted for joining with the cladding panels in an edge to edge relationship, the panel including a slit extending inwardly from an edge thereof for receiving a zone of an adjacent panel in an overlapping relationship, and being attachable to the constructional element.

The panels are preferably formed from sheet material having opposed edges of equal size. The material of the panel may be of a light gauge and the surface may be provided with formations for strengthening purposes.

Preferably the slit comprises a narrow cut out formed close to a corner of the panel. The length of the slit is chosen to provide a narrow zone of overlap when adjacent panels are joined.

Each panel is preferably a toothed rectangular sheet having their entire surface pressed to simulate an assembly of bricks and mortar, the

border zone being without such formations. Preferably the length of the slit corresponds with the width of the border zone so that adjacent panels may interlock only at the border zones.

An embodiment of the invention is described by way of example with reference to the accompanying drawings in which:

Figure 1 is a fragmentary perspective view of a building using the constructional element and panels of the invention;

Figure 2 is a perspective view of a constructional element according to the invention;

Figure 3 is a schematic section of a building constructed according to the invention; and

Figure 4 is a front view of panels according to the invention; and

Figure 5 is a fragmentary perspective view of another embodiment of constructional elements of the invention.

Referring to Figures 1 to 4 of the drawings a building 1 includes an assembly of vertical beams 2 and base rail 3 which are clad with panels 4.

The panels 4 comprise rectangular sheets having a flat zone 5 surrounding a raised surface 6 pressed to resemble an assembly of bricks. The panels 4 are formed of light gauge metal and the surface formations serve to stiffen the panels. A slit 7 extends from a short side of the toothed panel inwardly and parallel to a long side of the panel 4. During assembly of the panels 14 adjacent panels are overlapped by inserting an edge of one panel into the slit 7 of another panel. The overlapping zones are fastened to each other by means of rivets, screws or the like.

The beams 2 comprise rectangular section hollow metal beams having tongues 8, 9 formed at the base (and the top if desired). As seen in the drawing the tongue 8 is joined with a right angle formation to enhance anchorage to the base rail 3 (and similarly to top rail, if desired).

The base rail 3 (and top rail) has cut outs 10 for receiving the tongues 8, 9 of the beam 3. Cut outs 11 or orifices 11 are formed in register with the cut outs 10 for receiving wedges 12 or tapered elements 12 which on insertion deform the tongues 9 for locking the beam 2 to the base plate 3.

In use of the invention as seen in Figure 1 a plurality of vertical beams 2, top rails 13, intermediate rails 14 and ground beams 3 are arranged to constitute the supporting structure for a building 1. The structure is then clad with panels externally and internal panel of plastered chicken mesh, plastic panel, timber etc. to form a hollow corresponding with the width of the beams 2, 3, 13, 14. The hollow is filled with an infill material to provide for sound and heat insulation.

The locking of the intermediate rail 14 is achieved by means of tongues 15 which engage in slots 16 and may be displaced and secured by means of wedges 17. Metal rafter tubes 18 are provided to take metal roofing panels 19. The rafter tubes 18 are attached to the walls as shown at 20.

Referring to Figure 5 a vertical beams 21 has

tongues 22 for seating in corresponding grooves 23. A screw 24 is used to fasten the tongue 22 while a wedge 25 fastens the other tongue 22. The vertical beam 21 has spaced apart channel

5 formations for receiving panels and the like.

An advantage of the invention is that the building structure is in the form of modular readily assembled sections easily transportable additions may easily be constructed by connecting rails and

10 base top rails adjacent those forming existing structure and extending the building.

CLAIMS

1. A construction element including a vertical elongated member adapted for anchorage on a

15 base plate or a hollow body, the member including one or more formations for engagement with corresponding formations on the base plate or hollow body and means to wedge one or more

20 position on the base plate or hollow body to lock the member thereto.

2. A constructional element according to claim 1 in which the formations on the elongated member comprise projecting tongues adapted for

25 seating in grooves or bores formed in the hollow body.

3. A constructional element according to claim 2 in which the elongated member includes

30 four tongues arranged in a rectangular configuration for seating in corresponding bores formed in the hollow body.

4. A constructional element according to

claim 3 in which the means for displacing the tongue comprises a wedge shaped body.

35 5. A constructional element according to claim 4 in which the hollow body includes a passage for receiving the wedge shaped body.

6. A combination of a constructional element as claimed in any of claims 1 to 5 together with a

40 cladding panel adapted for joining with like panels in an edge to edge relationship, the panel including a slit extending inwardly from an edge thereof for receiving a zone of an adjacent panel in an overlapping relationship and being attachable

45 to the constructional element.

7. The combination as claimed in claim 6 in which the cladding panel includes one or more recessed zones for overlapping a recessed zone of

50 a like panel and the slit is formed in the recessed zone.

8. A cladding panel according to claim 7 in which the slot comprises a cut out formed in the panel.

55 9. A cladding panel according to claim 8 in which the length of the cut out corresponds with the width of the zone of overlap between two adjacent panels.

10. A building incorporating a constructional element of any one of claims 1 to 5 and a cladding

60 panel of any one of claims 6 to 9.

11. A constructional elements substantially as herein described with reference to any one of Figures 1 to 4 of the accompanying drawings.

65 12. A cladding panel substantially as herein described with reference to any one of Figures 1 to 4 of the accompanying drawings.