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(54) Method and means for construction work.

(57) A building element (10) comprises a box shaped body having side walls (12). The side walls each have two slots (16) which extend inwardly from the free edges thereof. The slots (16) receive edge portions of adjacent building elements during construction.

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FIELD OF THE INVENTION

This invention relates to a method and means for constructional work.

BACKGROUND OF THE INVENTION

Interlocking blocks of various types for both toys and in building constructions are well known.

OBJECT OF THE INVENTION

It is an object of the invention to provide blocks for constructional work.

THE INVENTION

A method of building according to the invention includes the steps of locating a plurality of open-top and open-bottom containers in a predetermined pattern, introducing a filler material in the containers and allowing the material to settle or set.

The containers are preferably disposable and may be removed after the mixture has set or may be permitted to remain in position for a time.

In a preferred form of the invention the disposable containers are cardboard boxes and they may be laid in their vertical or horizontal condition, but in whichever condition they are used, the tops and bottoms are removed.

The containers may be provided with vertical slots adapted to receive an edge of the container laid thereabove. These slots may be of predetermined depth so that they assist in the proper location of the containers. In fact, the slots may be such that they comprise the sole means of ensuring that the wall being built is vertical, once the foundations have been accurately laid.

According further to the invention tie rods are provided which span the containers and these may have extruding portions adapted to key in the plaster which may be applied after removal of the cardboard. It will be appreciated that the plaster may be applied to the cardboard.

In addition, vertical ties may be provided particularly at the top layer of the structure so as to provide a fixing for a wall plate or roofing elements.

The slots may be located midway on the top edges of the containers so that the end edges of the containers for location at the next layer will be staggered in relation to the layer below.

The cardboard containers may be specially treated for waterproof, pestproof and other properties so that they may be substantially permanent and it will be appreciated that they may be painted. The carboard may be treated with a cementitious mixture. For very low cost building, the building mixture may be sand or soil mixed with lime, cement, an aqueous polymer emulsion or the like.

According to another aspect of the invention a building element comprises a box shaped body having an open top and an open bottom, and at least some of the sidewalls including formations for engaging the edges of the side walls of adjacent blocks.

In a preferred form of the invention the formations comprise slots which extend for a short distance from the free edges of the side walls. Preferably the slots are formed on opposed side walls and the width corresponds with the thickness of the side wall. The blocks may include openings in opposed side walls to constitute connections between adjacent blocks.

Preferably the blocks are formed for use in building construction in which case a settable material may be filled in the space between the walls. Alternatively the blocks may be formed as toys in which event they may be reusable.

BRIEF DESCRIPTRION OF THE DRAWINGS

In the drawings:

Figure 1 is an isometric view of a building element according to one embodiment of the invention;

Figure 2 is an isometric view of a series of building elements of Figure 1;

Figure 3 is an isometric view of a series of building elements accordng to another aspect of the invention; and

Figure 4 is an isometric view of building tie.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to the drawings a building element 10 comprises a box shaped body having side walls 12.

In Figures 1 and 2 the height of the side walls 12 is greater than the width while in Figure 3 at least two side walls 14 have a width which is greater than the height. The side walls 12,14 each have two slots 16 extending inwardly from the free edge thereof. The width of the slots 16 correspond substantially to the thickness

of the walls. The slots 16 are formed midway between the ends on opposed side walls and along one face of the building element only.

The building elements 10 are formed from cardboard or the like material and have openings 18 on opposed side walls. A building tie 20 formed with wire is locatable in the slots 16 to strengthen the building element. Cutouts 21 are formed in the building elements to drain off excess water during building.

In use of the invention for building construction the building elements 10 are arranged as seen in Figures 2 and 3 with ties 20 located in the slots 16. A settable material is then poured into the space between the walls. The material flows through the opening 18 hence forming a continuous interconnected structure. If the building elements 10 are used as toys the ties 20 and the settable material are omitted so that the building elements are reusable.

An advantage of the invention is that the building elements may be speedily assembled with unskilled labour and the interlocking arrangement ensures that the assembly has the correct dimensions.

CLAIMS:

1.

A method of building including the steps of locating a plurality of open-top and open-bottom containers in a predetermined pattern, introducing a filler material in the containers and allowing the material to settle or set.

2.

A method according to claim 1 in which the filler material comprises a cementitious material which is filled in containers comprising cardboard boxes which are stacked one upon the other and the material is allowed to set.

3.

A method according to claim 1 or claim 2 which includes the steps of locating a tie on the containers and cladding the outer surface of the containers.

4.

A building element comprising a box shaped body having an open top and an open bottom, and at least some of the side walls including formations for engaging the

edges of side walls of adjacent blocks.

5.

A building element according to claim 4 in which the formations comprise slots which extend for a short distance from the free edges of opposed side walls, the width of the slots corresponding with the thickness of the side walls.

6.

A building element according to claim 4 or claim 5 formed from a cardboard material having openings in opposed side walls.

7.

A building element according to any one of claims 4 to 6 formed for construction of fixed structures.

8.

A building element according to any one of claims 4 to 6 formed to constitute a toy.

9.

A building constructed according to a method of any one of claims 1 to 3.

10.

A building constructed with building elements of any one of claims 4 to 8.

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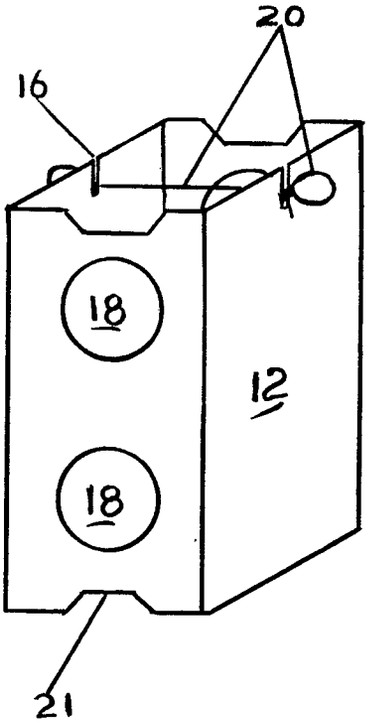

FIG 1

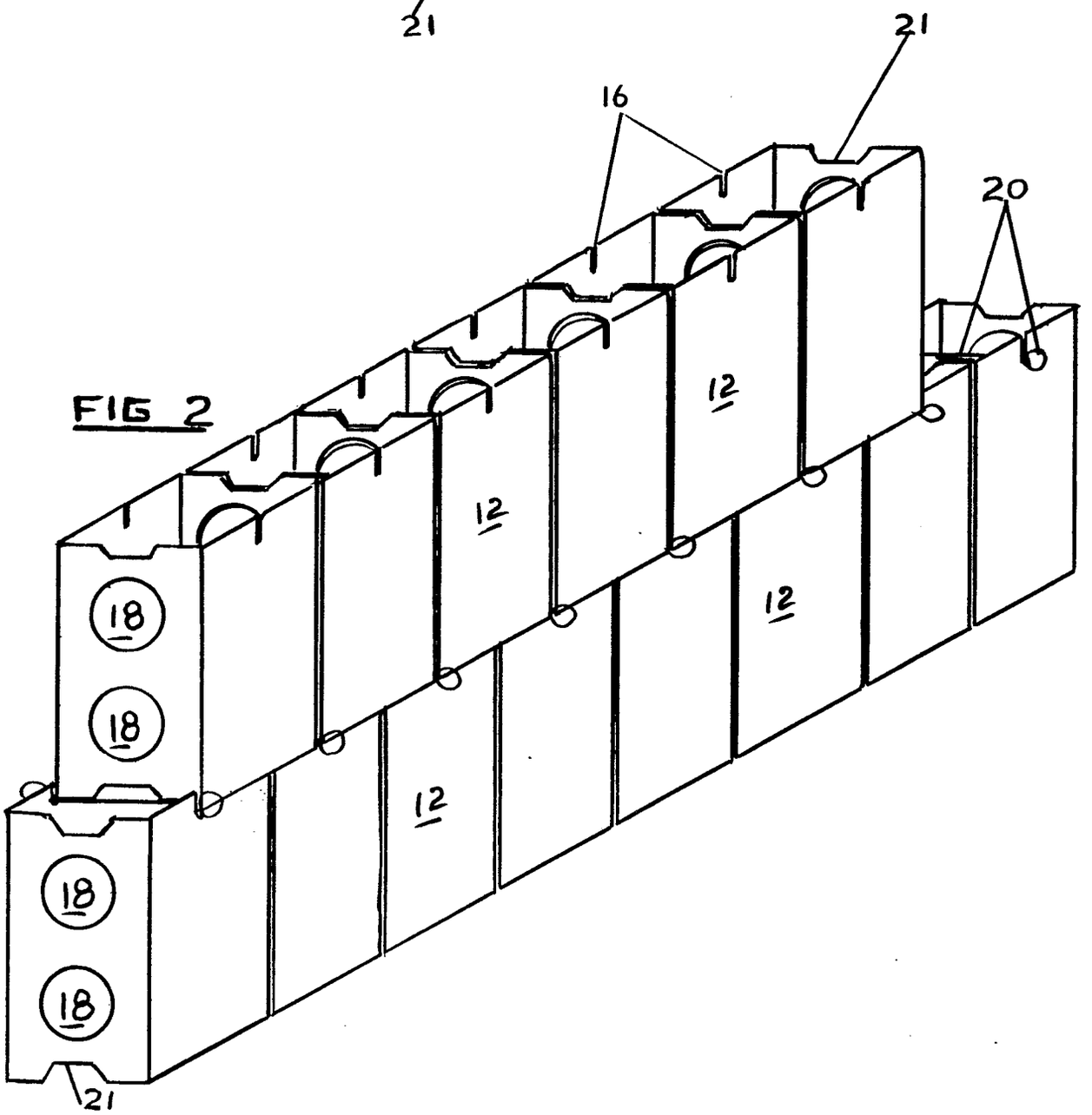

FIG 2

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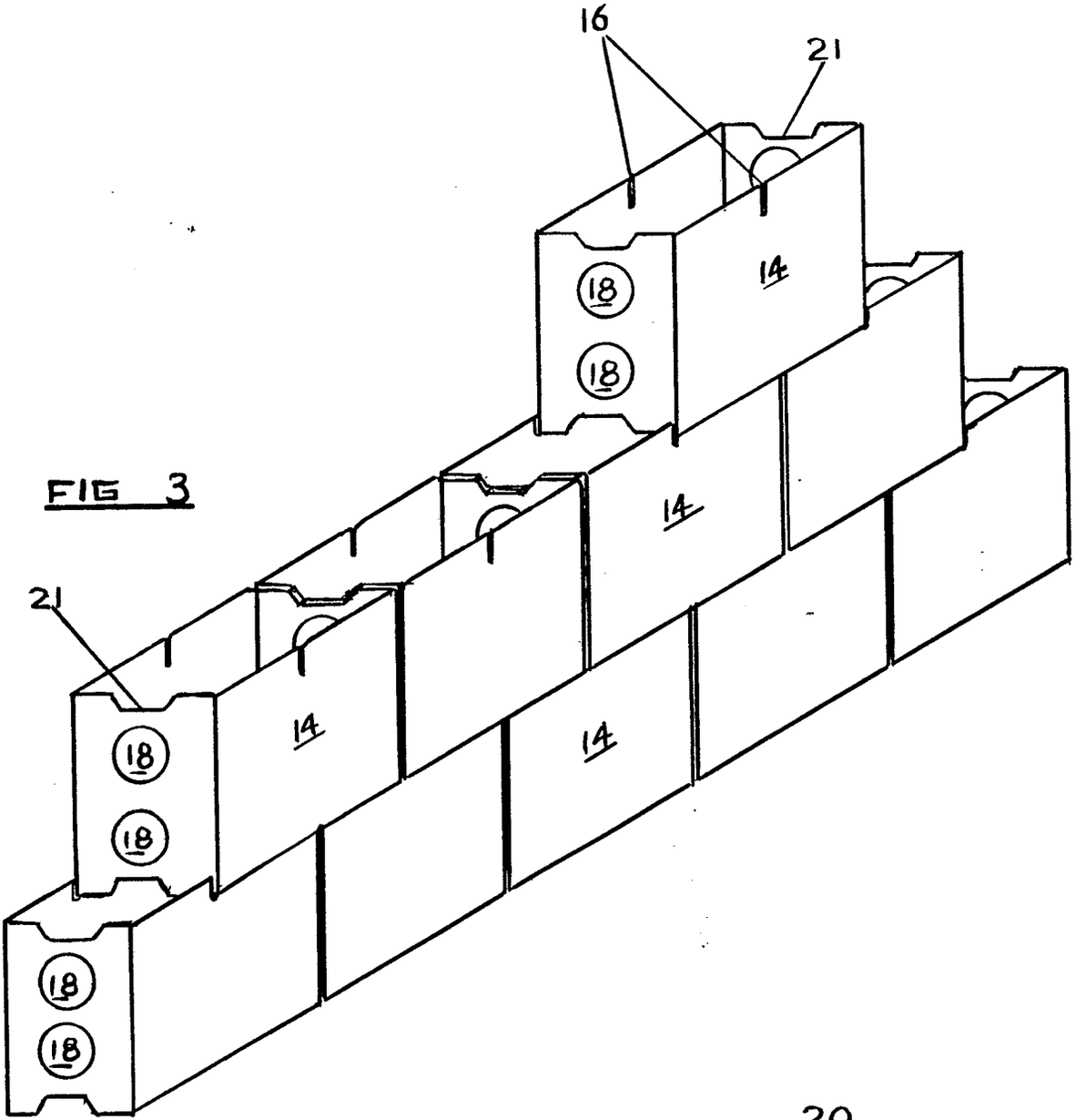

FIG 3

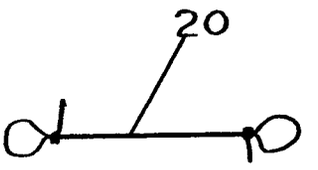

FIG 4