

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in or relating to Constructional Toy Buildings

- We, MECCANO LIMITED, of 236, Binns Road, Liverpool, 13, Lancashire, a British company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- The present invention concerns constructional toy buildings.
- 5 An object of the invention is to provide an arrangement of toy building wall components which can readily be assembled together with floor and/or roof components to form a lightweight and robust structure.
- 10 According to the present invention a constructional toy building includes end and side wall components in which a first wall presents a vertically extending groove adjacent one end on its inside face, said groove being complementary to a vertically extending projection on the end face of a second wall whereby engagement of the abutting surface of the second wall in the groove of the first wall prevents displacement of the first wall in a horizontal direction towards and in the plane of the second wall and in either horizontal direction parallel to its own plane, a pair of surfaces adapted to be inter-engaged by relative vertical displacement of said walls preventing displacement of the first wall in a direction away from and in the plane of the second wall. Moreover the groove may have parallel side surfaces each at right angles to the inner and outer faces of the first wall, and in addition may have a flat root surface parallel to the inner and outer faces of the first wall.
- 15 The pair of surfaces may be presented by an inwardly extending lug of the second wall and a root surface of a recess in the outer face of the first wall, both said surfaces extending parallel to the inner and outer faces of the first wall. Moreover this pair of surfaces may extend vertically for a fraction of the total height of the first and second walls, the projection of the second wall being interrupted by an amount greater than twice the height of these surfaces whereby to enable the projection to be slid in the groove whilst said pair of surfaces are engaging.
- 20 The invention will be described further, by way of example, with reference to the drawings accompanying the provisional specification, in which:—
- 25 Fig. 1 is a perspective view of parts of end and side wall components as seen from within a toy building, but separated from one another in the horizontal direction parallel to one of the wall components;
- 30 Fig. 2 is a fragmentary perspective view showing the same components as seen from outside the building, in their horizontally engaged position but before being displaced relative to one another into the final and fully interlocked vertical position; and
- 35 Fig. 3 is a perspective detail showing a preferred method of attaching a roof component to a floor component.
- 40 An end wall component 11 is provided with a vertically extending groove 11a presenting two parallel vertical surfaces which can fit against the complementary surfaces of a rib 12a on a side wall component 12.
- 45 The end component 11 also has a recess 11b (Fig. 2) near its lower edge which has a vertically extending surface parallel to the face of the end component 11 adapted to fit against a complementary surface of a lug 12b appropriately positioned on the wall component 12.
- 50 The components are assembled by engaging the rib 12a in the groove 11a (Fig. 2) with the components relatively displaced from the final and desired vertical position so that the lug 12b lies below but in alignment with the recess 11b. The components are then moved together in the vertical direction until the said complementary surfaces on the lug and

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recess engage with one another.

In this position (not shown) the end component is interlocked with the wall component, the interlock consisting of one set of surfaces constituted by the respective pairs of parallel rib and groove surfaces which prevent relative displacement in the horizontal direction parallel to the end component, and another set of surfaces constituted by the recess surface which is parallel to the face of the end component and the complementary lug surface, together with the central surface of the groove 11a which is parallel to the face of the component 11 and the complementary surface of the rib 12a.

The interlock is conveniently maintained by engaging the upper edge region 13a of a wall or end component 13 in a horizontally extending inverted groove 14a in a roof component 14 and locking the components 13 and 14 together by a screw 15 passing through a lug 13b on the wall or end component and engaging in a screwed bore of a depending boss 14b of the roof component. The lug 13b has an open slot through which the screw 15 passes, thereby facilitating manufacture and assembly, correct location being effected by the interfitting region 13a and groove 14a. The other end component is fixed to the roof component 14 in a like manner.

WHAT WE CLAIM IS:—

1. A constructional toy building including end and side wall components in which a first wall presents a vertically extending groove adjacent one end on its inside face, said groove being complementary to a vertically extending projection on the end face of a second wall whereby engagement of the abutting surface of the second wall in the groove of the first wall prevents displacement of the first wall in a horizontal direction

towards and in the plane of the second wall and in either horizontal direction parallel to its own plane, a pair of surfaces adapted to be inter-engaged by relative vertical displacement of said walls preventing displacement of the first wall in a direction away from and in the plane of the second wall.

2. A constructional toy building as claimed in Claim 1, in which the groove has parallel side surfaces each at right angles to the inner and outer faces of the first wall.

3. A constructional toy building as claimed in Claim 1 or 2 in which the groove has a flat root surface parallel to the inner and outer faces of the first wall.

4. A constructional toy building as claimed in Claim 1, 2 or 3 in which the pair of surfaces are presented by an inwardly extending lug of the second wall and a root surface of a recess in the outer face of the first wall, both said surfaces extending parallel to the inner and outer faces of the first wall.

5. A constructional toy building as claimed in Claim 4, in which the pair of surfaces extend vertically for a fraction of the total height of the first and second walls, the projection on the second wall being interrupted by an amount greater than twice the height of these surfaces whereby to enable the projection to be slid in the groove whilst said pair of surfaces are engaged.

6. A constructional toy building constructed and arranged substantially as herein described, with reference to and as illustrated in the drawings accompanying the provisional specification.

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PROVISIONAL SPECIFICATION

Improvements in or relating to Constructional Toy Buildings

We, MECCANO LIMITED, a British company, of 236, Binns Road, Liverpool, 13, Lancashire, do hereby declare this invention to be described in the following statement:—

The present invention concerns constructional toy buildings.

An object of the invention is to provide an arrangement of toy building wall components which can readily be assembled together with floor and/or roof components to form a lightweight and robust structure.

According to the present invention a constructional toy building includes end and side wall components which are shaped to interlock at their common corner region by a displacement of one said component in the vertical direction relative to the other said component and are then maintained interlocked by attachment of both said components to a roof and/or

floor component so as to prevent their relative vertical displacement.

Preferably the interlock consists of two sets of coacting surfaces, one set preventing relative movement in the horizontal direction parallel to the end wall and the other set preventing relative movement in the horizontal direction parallel to the side wall.

The invention will be described further, by way of example, with reference to the accompanying drawings, in which:—

Fig. 1 is a perspective view of parts of end and side wall components as seen from within a toy building, but separated from one another in the horizontal direction parallel to one of the wall components;

Fig. 2 is a fragmentary perspective view showing the same components as seen from outside the building, in their horizontally

engaged position but before being displaced relative to one another into the final and fully interlocked vertical position; and

5 Fig. 3 is a perspective detail showing a preferred method of attaching a roof component to a floor component.

An end wall component 11 is provided with a vertically extending groove 11*a* presenting two parallel vertical surfaces which can fit 10 against the complementary surfaces of a rib 12*a* on a side wall component 12.

The end component 11 also has a recess 11*b* (Fig. 2) near its lower edge which has a vertically extending surface parallel to the 15 face of the end component 11 adapted to fit against a complementary surface of a lug 12*b* appropriately positioned on the wall component 12.

The components are assembled by engaging 20 the rib 12*a* in the groove 11*a* (Fig. 2) with the components relatively displaced from the final and desired vertical position so that the lug 12*b* lies below but in alignment with the recess 11*b*. The components are then moved 25 together in the vertical direction until the said complementary surfaces on the lug and recess engage with one another.

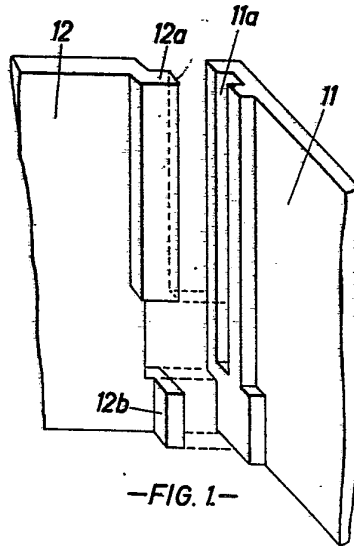
In this position (not shown) the end component is interlocked with the wall component,

the interlock consisting of one set of surfaces 30 constituted by the respective pairs of parallel rib and groove surfaces which prevent relative displacement in the horizontal direction parallel to the end component, and another set of 35 surfaces constituted by the recess surface which is parallel to the face of the end component and the complementary lug surface, together with the central surface of the groove 11*a* which is parallel to the face of the component 11 and the complementary central surface of 40 the rib 12*a*.

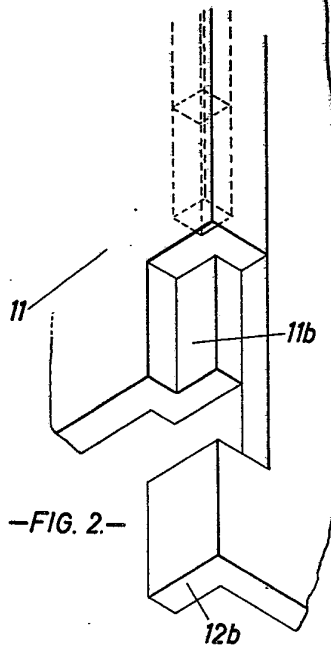
The interlock is conveniently maintained by engaging the upper edge region 13*a* of a wall or end component 13 in a horizontally extending 45 inverted groove 14*a* in a roof component 14 and locking the components 13 and 14 together by a screw 15 passing through a lug 13*b* on the wall or end component and engaging 50 in a screwed bore of a depending boss 14*b* of the roof component. The lug 13*b* has an open slot through which the screw 15 passes, thereby facilitating manufacture and assembly, correct location being effected by the interfitting region 13*a* and groove 14*a*.

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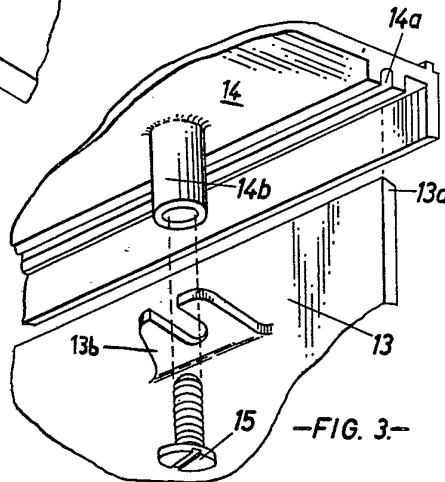
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-FIG. 1-



-FIG. 2-



-FIG. 3-