

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in Toy Building Blocks.

I, HARRY FISHER PAGE, a British subject of 66, Barkston Gardens, Kensington, London, S.W.5, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention has reference to toy building blocks of the type in which the upper surface of a block is formed with projections, the construction of the block being such that a superimposed block can engage on a block or blocks beneath.

My prior Patent No. 529580 describes and claims a building block of hollow form with bosses or like projections on the face opposite the open face and disposed so as to engage within the inner surfaces of the lateral walls of a superimposed block and prevent lateral movement. My prior Patent No. 587206 a Patent of Addition to Patent No. 529580, concerns a block or like element having the aforesaid manner of interlock of upper and lower blocks but which is of greater length than width and has a correspondingly greater number of bosses lengthwise than crosswise, thus providing for interlock of an upper and lower block by at least four bosses, and at the same time presenting at least two additional bosses for locking engagement in the cavity of a third block.

The primary object of the present invention is to provide an improved form of building block which enables a built up column or structure to support vertical sheets or like thin members which may represent windows, doors, or the like. A further object is to provide a construction in which the blocks will interlock firmly.

According to this invention, a toy building block of the type set forth is provided, said block comprising a hollow thin walled body with projections or bosses on the face opposite the open face, and disposed so as to be capable of engagement within the inner surfaces of the lateral walls of a superimposed block, with at least one vertical (i.e. at a right angle to the upper and open faces)

slot through a lateral wall of the block.

The blocks are preferably of square form in plan, or they may be of a length twice their width, so as to represent half bricks and bricks respectively. In these cases it is preferred to provide one slot through each wall of a pair of opposite wall faces, which in the case of the oblong blocks, are the end faces.

The above described arrangement, enables structures to be built up with a vertical slot which can receive the thin sheets aforesaid. Further, the blocks will have a degree of resiliency, so that when a block is mounted on another block, there will be a slight opening out due to the slots, and the inherent resilience of the blocks will tend to close the blocks, thus ensuring a firm fit.

In order that a clear understanding of the various forms of the invention may be obtained reference will now be made to the accompanying drawings which illustrate preferred constructions. In the drawings:—

Fig. 1 is a perspective view of one form of block constructed in accordance with the invention,

Fig. 2 is a plan view of another form of block,

Fig. 3 is an underneath plan view of the block illustrated in Fig. 2,

Fig. 4 is an enlarged fragmentary plan view showing the slotting of the blocks.

Fig. 5 is an underneath plan view of the block illustrated in Fig. 1,

Fig. 6 is a plan view of another form of block,

Fig. 7 is a similar view of a further form,

Fig. 8 is a front view of a double gate to be built into a wall constructed from the blocks,

Fig. 9 is an elevation of a wall built from the blocks and with a door in position and

Fig. 10 is an elevation of a clock tower built from the blocks.

Fig. 11 is an end view of the bricks at one side of the opening showing the alignment of the slots.

Fig. 12 is a perspective view of another

block for use in building.

Referring firstly to Fig. 1, the block illustrated in Figs. 1 and 5 comprises a rectangular hollow body 10 having a length which is double its width. The cavity 11 (Fig. 5) within the block is open to the bottom of same and has a configuration corresponding to the external rectangular form of the block, the latter having a relatively thin wall comprising longitudinal walls 12a and transverse or end walls 12b. On its upper face the block is formed integrally with two longitudinal rows of bosses 13 which may be circular as shown or of other suitable shape. The bosses 13 are symmetrically disposed as shown and are uniformly spaced both longitudinally and transversely of the block. There are four bosses in each longitudinal row, those of one row being transversely aligned with those of the other row to provide a number of pairs.

In each transverse or end wall 12b and centrally of the wall a vertical slot 14 is formed. The blocks are moulded from a suitable synthetic resinous substance or plastic of suitable colour.

Referring to the construction shown in Figs. 2 and 3, the block is of square shape in plan and has four bosses 13 on its upper face. The walls 12a normally form the wall faces when built up, and the walls 12b form the end walls. These walls 12b are slotted as shown, the slots 14 being vertical with one centrally of each end wall.

Fig. 4 shows in plan a slot to an enlarged scale. The slot tapers from the outer wall face to the inner face, and thickened portions 14a are provided on the inner wall face along each edge of the slot. These thickened portions increase the strength of the wall at the slot and prevent breaking or chipping when a sheet is built into a slot by its marginal portion as later described.

Referring now particularly to Figs. 3 and 4, 5 which are underneath plan views of the two forms of block described above, the overall dimension over each transverse pair of projections or bosses i.e. those parallel with the slotted end walls, is at least equal to the width of the cavity in the block. The said overall dimension may be slightly greater than the width of the cavity.

When the blocks are built up, the cavity of each block will engage over the bosses on the upper faces of the blocks immediately underneath, and the longitudinal walls or walls 12a will be forced apart slightly, the slots allowing this and opening slightly. The inherent resilience of the material forming the blocks will ensure that the bosses fit firmly, and the rigidity of the built up structure is thereby increased.

Referring to the form of block illustrated in Fig. 6, the block 10 is of quadrant shape in plan and has three bosses 13 on its upper

face. These bosses are disposed one near the junction of the two straight lateral walls 12c and one near the end of each lateral wall as shown. These quarter-circular bricks may be used in building in conjunction with the other two forms of brick described and illustrated, and may be used to form curved wall ends, openings, for building towers, circular chimneys, funnels, columns or the like. Slots 14, also may be provided in the straight lateral walls. An alternative form is illustrated in Fig. 7, wherein the brick 10 is of elongated form and has one longitudinal lateral wall 12a equal to twice the length of the transverse wall 12b i.e. its length is twice its width, but the end 12d opposite the transverse face 12b is of arcuate shape the radius of the arc equalling the width of the block, so that the arcuate portion is a quarter of a circle and extends from a corner of the block and meets the opposite longitudinal lateral wall face tangentially.

In Fig. 8, a thin sheet 15 of cardboard, celluloid or metal is shown painted or otherwise treated to represent a double gate. The sheet 15 has vertical marginal portions 15a. Other representations on sheets, such as doors, windows, clock faces or shop fronts may be provided.

Fig. 9 illustrates how a model wall can be built up with a door built therein and rigidly held. The blocks 10 are built up to give a half band effect, and the door 15 engages by its vertical marginal portions 15a in the vertical slot formed at each side of the opening by aligning slots in superimposed blocks. The width of the sheet 15 between the blocks is equal to the length of one of the elongated blocks, but other sheets may be provided equal to a half brick, brick and a half, two bricks or more. For example, small windows may be of half brick width, larger windows of one or more brick width. It will be observed that alternate blocks at the opening are of the "half brick" or square form of Figs. 2 and 3, to form a flush finish to the opening.

In the arrangement illustrated in Fig. 10, there is illustrated a clock tower built up from the blocks. The sheet 15 has a clock face depicted thereon. In the above examples, the marginal portions of the sheets 15 engage in aligning slots shown in Fig. 11, the tapering of the slots resulting in an adequate gripping of the embraced marginal portion.

It will be understood that the blocks may be used to build walls as described in my prior Patent No. 597206.

Further, some of the blocks may have bosses on only one half of the upper face. Thus, in the case of the blocks illustrated in Figs. 1 and 5, two transverse pairs at one end will be omitted, whilst in the case of the blocks illustrated in Figs. 2 and 3, only one

transverse pair will be provided. This will allow for the face of a brick which projects from a column or the like, for example, the bricks 10a in Fig. 10, to be plain thereby enhancing the appearance of the finished structure. Also, bricks may be provided for use as an upper course of a wall or the like having no projections, these bricks however bonding on the bosses of underneath bricks.

A further form of brick for the top course of a wall or the like having a ridge like upper surface also may be provided, as shown in Fig. 12.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. A toy building block of the type set forth, comprising a hollow thin walled body with projections or bosses on the face opposite the open face and disposed so as to be capable of engagement within the inner surfaces of the lateral walls of a superimposed block, with at least one vertical slot through a lateral wall of the block.

2. A toy building block or like element as claimed in Claim 1 wherein two slots are provided through opposite wall faces and centrally of each face.

3. A toy building block or like element as claimed in Claim 2, characterised in that the block is square in plan and four bosses are provided each situated within a square quarter section of the cube face.

4. A toy building block as claimed in Claim 1 or 2, wherein the block has a length which is double its width and the bosses are arranged in two longitudinal rows in transverse pairs and with four bosses in each row and the said bosses uniformly spaced, with a central vertical slot in each transverse or end wall.

5. A toy building block as claimed in any of the preceding Claims, characterised in that the overall dimension over each transverse pair of projections is at least equal to the width of the cavity in the block

6. A toy building block as claimed in Claim 1 said block comprising a hollow body of quadrantal shape, with three bosses or like projections on the face opposite the open face the said bosses being disposed one near the junction of the two straight lateral walls and one near each end of each lateral wall so as to engage within the inner surfaces of the lateral walls of a similar superimposed block.

7. A toy building block or like element as claimed in Claim 6, and having at least one vertical slot through one or both straight lateral walls.

8. A toy building block or like element as claimed in Claim 1 or 2, wherein the brick is of elongated form and has one longitudinal lateral wall face equal to twice the length of its transverse wall face, the end opposite the said transverse face being of arcuate shape, the radius of the arc equalling the width of the block so that the arcuate lateral wall portion extends from a corner of the block and meets the opposite longitudinal lateral wall face tangentially.

9. Toy building blocks substantially as herein described with reference to the accompanying drawings.

Dated this 25th day of June, 1945.
KING'S PATENT AGENCY LIMITED.

By
B. T. KING, A.I.Mech.E.,
Director.
Registered Patent Agent,
146a, Queen Victoria Street,
London, E.C.4.
Agents for the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale.]

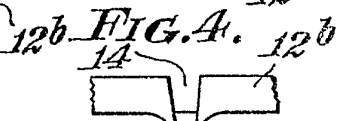
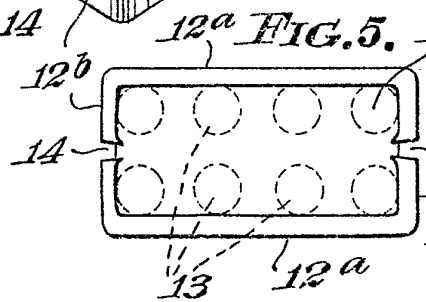
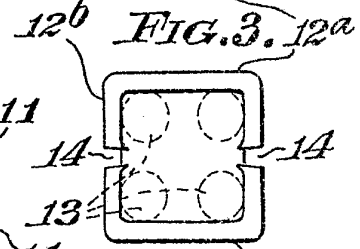
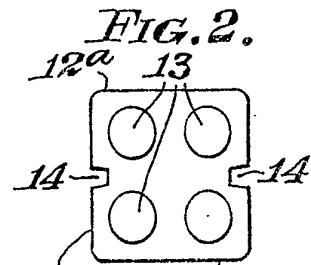
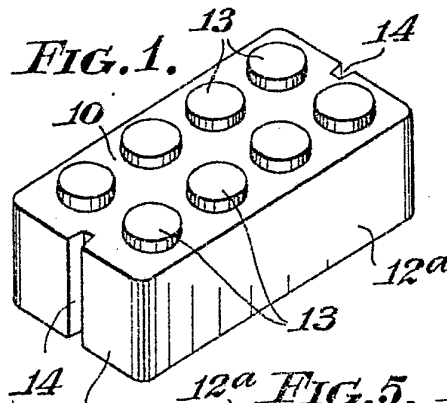


FIG. 6.

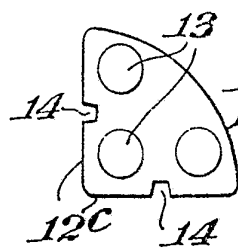


FIG. 7.

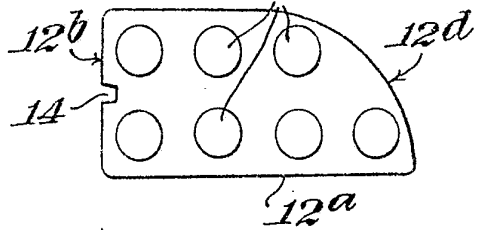


FIG. 8.

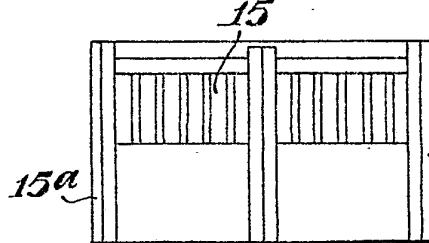
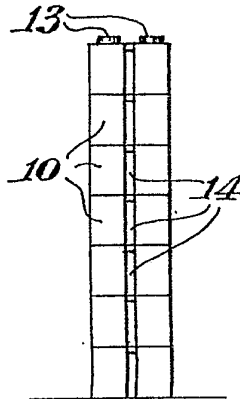
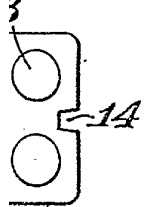


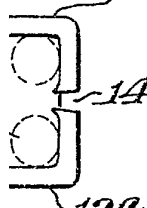
FIG. 11.



1. 2.



3. 3. 12a



4. 12b



4a

12d



FIG. 11.

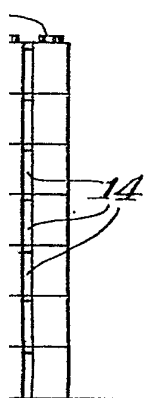


FIG. 9.

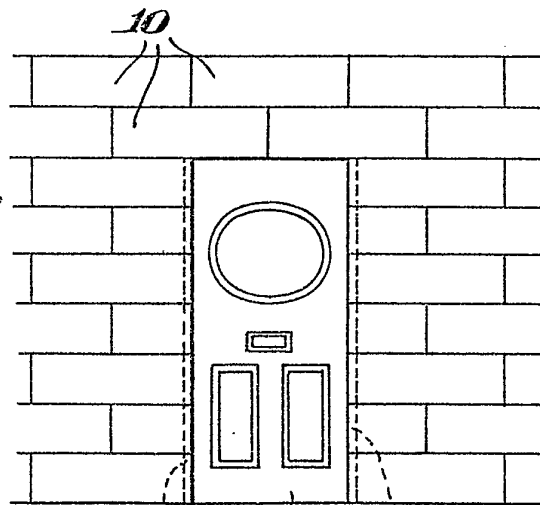


FIG. 12.

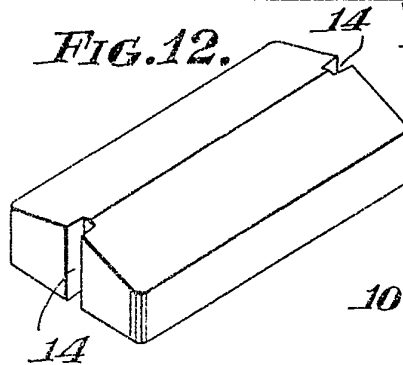
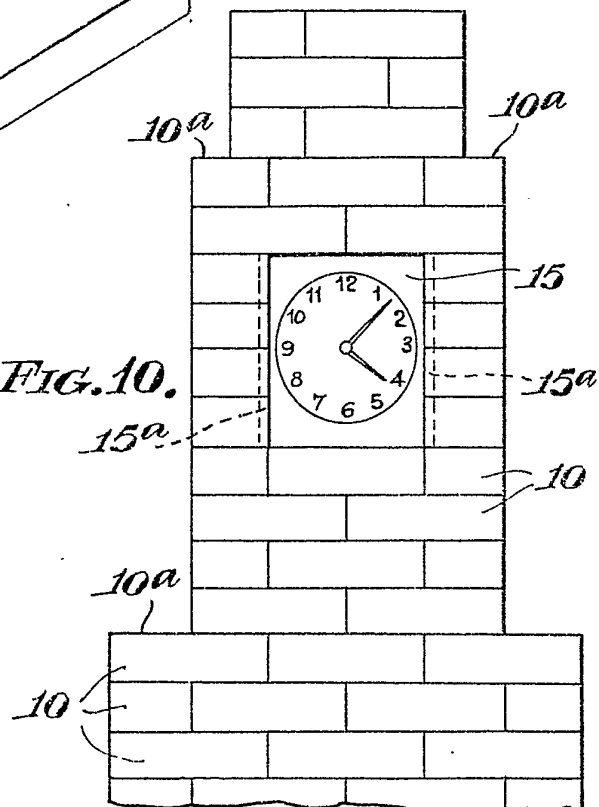
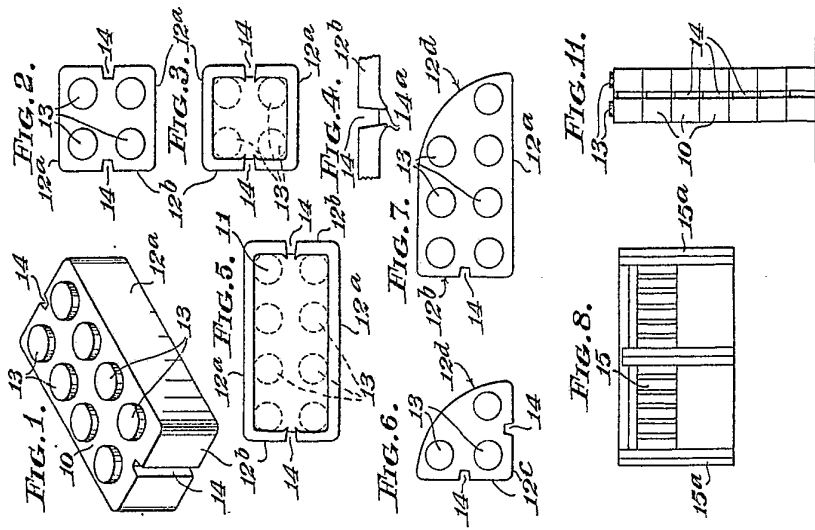


FIG. 10.





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