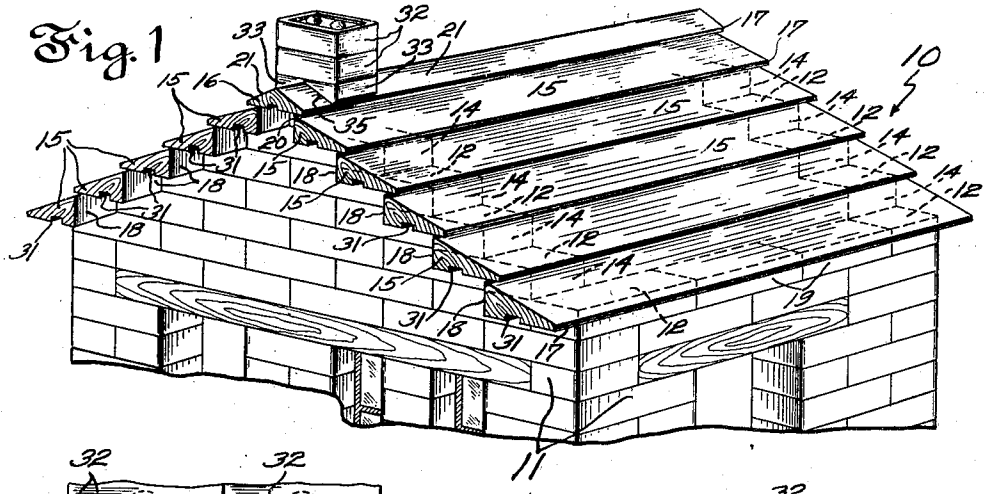
May 25, 1948. O. P. ERHARDT 2,442,122

CONSTRUCTIONAL TOY BUILDING ELEMENTS

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Fig. 1



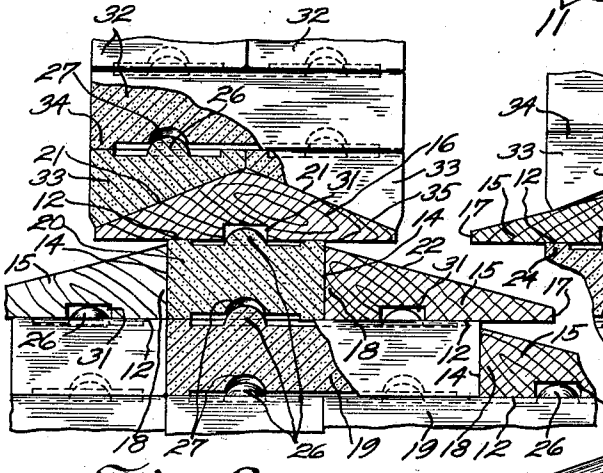


Fig. 2

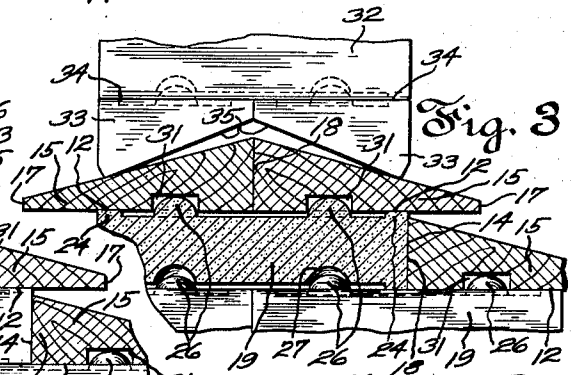


Fig. 3

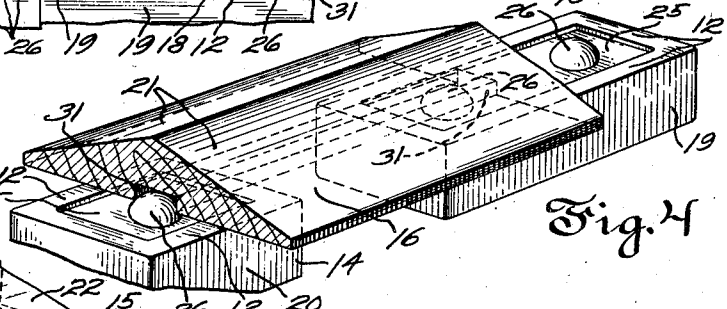


Fig. 4

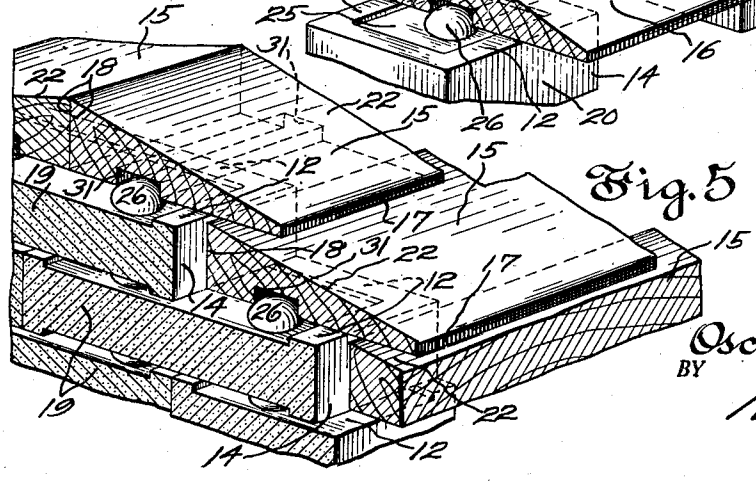


Fig. 5

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Fig. 7

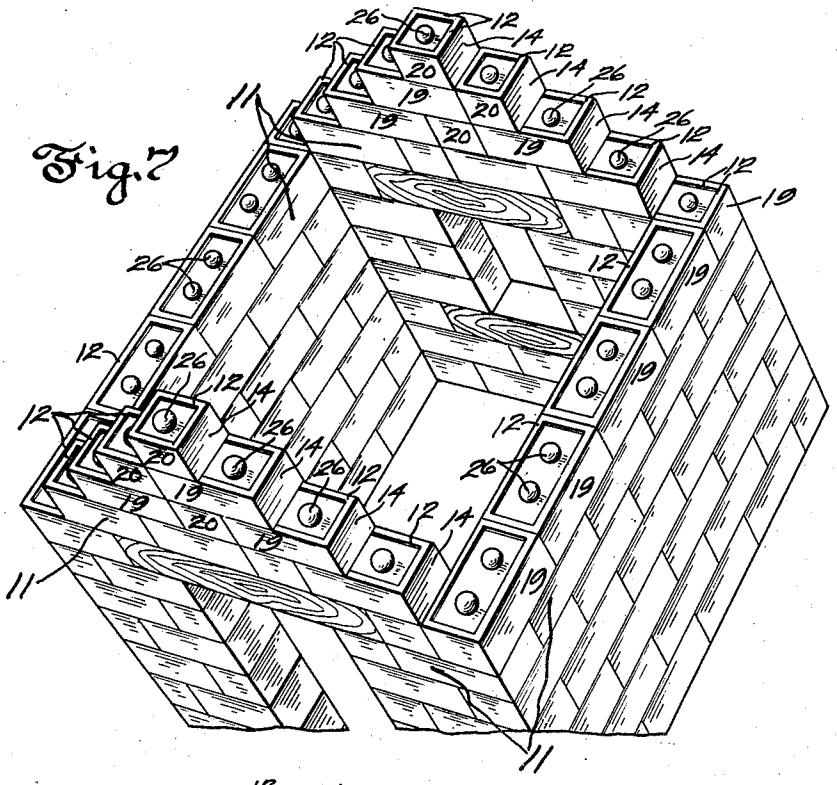
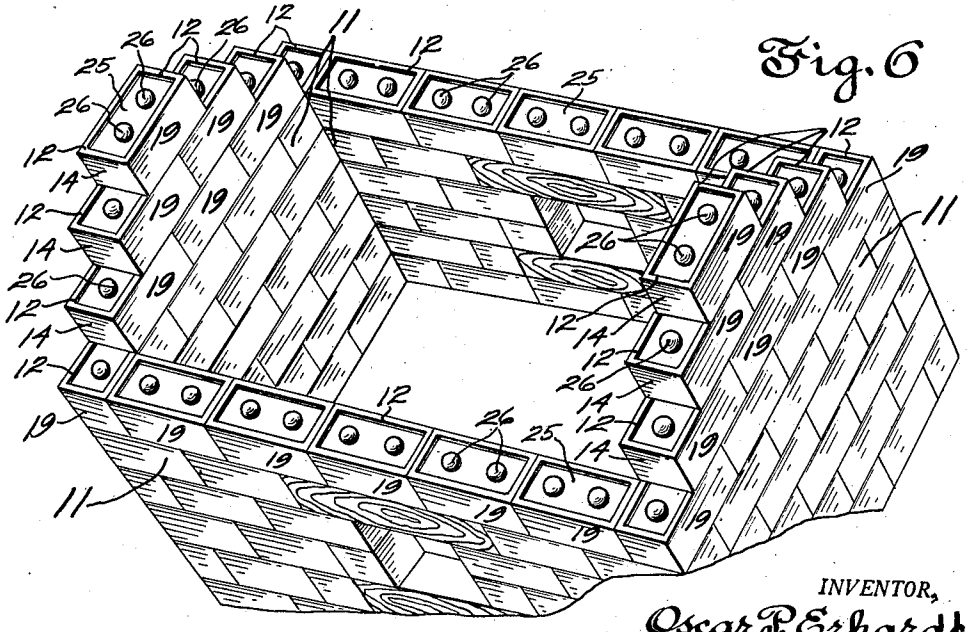


Fig. 6



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CONSTRUCTIONAL TOY BUILDING ELEMENTS

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Application September 20, 1945, Serial No. 617,547

7 Claims. (Cl. 46—25)

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This invention relates to constructional toy building elements particularly of the piling variety adapted for use with toy building blocks of the type disclosed in my copending application, Serial No. 519,433, filed January 24, 1944.

An object of the present improvements is to provide constructional toy parts that can be piled in various chosen arrangements to resemble realistically in miniature the tile roof of real building structures.

A further object is to make use of elongated laterally overlapping bars arranged in step formation to simulate roofing tiles in such arrangement that one bar overhangs another in a way to cause a shadowed nook or angular gap beneath the overhanging edge of each bar.

Another object is to provide means for orienting the tile simulating bars in parallel and overlapping relation when they are piled and for resisting accidental lateral displacement of the piled bars.

A still further object is to provide a ridgepole tile simulating bar or bars that may be used as a foundation on which to pile suitable additional toy blocks representative of a brick or stone chimney.

These and other objects of the invention will become clear in the following description of illustrative toy building elements embodying a satisfactory form of the invention which description has reference to the accompanying drawings wherein:

Fig. 1 is a perspective view of the upper portion of a toy house structure built by piling toy roof tile elements on the bare toy building walls shown in Figs. 6 and 7 in accordance with the present invention.

Fig. 2 shows on an enlarged scale a fragmentary transverse cross-sectional view of the imitative tile roof forming bars of Fig. 1 piled in dowel oriented relationship to the wall forming blocks of Figs. 1 and 7.

Fig. 3 shows a modified shape and arrangement of the roof forming bars at the ridge pole suited to the wall forming blocks of Fig. 6.

Fig. 4 is a diagrammatic perspective view of the ridge pole roof bar of Figs. 1 and 2 illustrative of the many dowel oriented relationships in which any roof bar can be lodged on the seating surface of any wall block.

Fig. 5 is a fragmentary perspective view of the dowel oriented roof bars and wall blocks of Fig. 3.

Fig. 6 is a perspective view of the bare tops of walls formed by blocks piled as in Figs. 1 and 2.

Fig. 7 is a corresponding view of the stepped wall tops formed by blocks piled as in Figs. 3 and 5.

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In Fig. 1 the toy building structure indicated as a whole by 10 includes two pairs of upstanding imitative house walls 11 of which one pair may be referred to as end walls which are spaced apart and have correspondingly stepped tops presenting corresponding seats or seating surfaces 12 at vertically spaced levels joined by corresponding risers or riser surfaces 14 extending vertically between the seats. The space between end walls 11 is spanned by parallel tile imitative roof bars 15 in the shape of substantially triangular prisms forming the slopes of the roof and in Figs. 3 and 5 also used as the toy tile bars occupying the ridge pole position in the roof. In Figs. 1 and 2, however, a modified form of tile imitative roof bar 16 having oppositely pitched top faces 21 is used in the ridge pole position.

According to this invention the horizontal bottom face of each of the roof bars 15 rests near each end of the bar at a common level on companion seats or seating surfaces 12 of the stepped tops of the spaced toy building walls 11. Each bar has an edge facing and flanking the riser 14 that extends upward from the seat 12 on which the bar rests. The roof bars 15 are caused realistically to resemble actual roof tiles by having their seated horizontal bottom faces wider than the seats 12 of the walls on which they rest whereby the marginal portion of one bar at its relatively thin edge overhangs the seat 12 so that each bar overlaps both the wall seat on which it rests and also the relatively thick edge 18 of the next lower adjacent bar and moreover is vertically separated therefrom by an angular space in the nature of an elongated shadowed nook lending to the toy roof an effective appearance of thickness and structural complexity that would not otherwise result.

The thick edge 18 of the bar is preferably vertically thinner than the height of the riser which it abuts.

Each of roof bars 15 tapers in vertical thickness from its relatively thick edge 18 to its relatively thin edge 17 at such angle that when the bar is based on a horizontal plane the top face 22 of the bar slants downward away from the bottom face of the next higher bar toward its thin overhanging edge 17 with preferably less pitch than the overall or general slant of the roof as a whole. This creates a stepped appearance to the roof surface which is characteristic of the visual effect of real tile roofs.

Specifically though not necessarily the walls 11 may be composed of loosely piled toy building

blocks 19 simulating in miniature size actual building bricks or artificial cut stone blocks. These toy blocks 19 have structural features orienting them in a way to make them resistive to misalignment and accidental displacement when piled one upon another unskillfully as by a child. The structural features of bricks 19 are described and claimed in detail in my copending application hereinbefore referred to. It will suffice here to note with particular reference to Figs. 6 and 7 that in some cases the wall forming bricks 19 may be piled so as to terminate at the ridgepole position in a single full size brick 19 as in Figs. 3, 5 and 6, whereas in other cases the bricks may be piled so that a half length brick 20 may be at the ridgepole position as in Figs. 1, 2, 4 and 7.

The toy brick imitative blocks contemplated for use with the tile roof simulating elements of the present improvements will preferably be configured to present rounded dowel bosses 26 which project from recessed panel portions 25 of the block faces to a greater extent than does the border ridge 24 of the block. In the opposite panel portion of a given brick there are corresponding dowel sockets 27 spaced to accord with the spacing of bosses 26 and adapted to receive the latter bosses of a mating brick with a fairly snug lateral fit. The configuration of boss and socket is such as to leave clearance spaces between the tips of the bosses and the bottom of the sockets thus insuring that the planar ridges 24 of mating bricks will mutually contact in a firm manner and prevent wobbling of the piled blocks.

The drawings show that each roof bar 15 and 16 has a longitudinally extending recess or groove 31 spaced from both edges of the bar and shaped and directed to receive the dowel bosses 26 with close enough fit to orient neighboring bars in parallel relation and resist lateral displacement thereof.

Figs. 1 and 2 show, in addition to the roof bars 15 and 16, blocks 32 imitative of chimney bricks. Specially shaped adaptor blocks 33 underlie the chimney forming blocks 32 and are featured by a horizontal top face 34 stably supporting the superimposed chimney structure and by a bottom face 35 slanting in conformity with the top inclined faces 21 of the cap bar 16 and resting thereon. In Fig. 2 these same adaptor blocks 33 are shown to rest on the top faces of the roof bars 16.

The addition to the constructional toy set disclosed in my hereinbefore mentioned copending patent application of tile roof simulating bars shaped and related as herein disclosed greatly enhances the number and realism of models that can be built thus lending zest in creative play with architectural constructions for young model builders. It enables piled block structures to reproduce more faithfully the outstanding appearance most characteristic of buildings provided with a tile roof, such as residences, roadside food stands, garages, cabins, fire houses, churches and public buildings. Since the dowel and socket orienting engagement of the roof bars and their supporting wall blocks automatically brings the building elements into correct relationship and stabilizes them against accidental displacement from proper position, no skill in positioning of the blocks and bars but only imagination in their selection to build the desired structures is required of the child and there results uniform excellence and "true-to-life" accuracy in any chosen model that is built.

The appended claims are directed to and intended to cover as my invention all obvious equivalents, substitutes and mere variations in the particular sizes, shapes and relationships of toy building elements herein disclosed.

I claim:

1. In a constructional toy, pilable elements adapted to simulate tile roof in a toy building, comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seats at vertically spaced levels alternating with risers extending vertically between said seats, toy roof bars each having a horizontal bottom face resting on and substantially wider than companion seats at a common level on respectively spaced walls, each bar further having an edge facing a riser that extends upward from the seat on which said bar rests and having an opposite edge overhanging the riser that extends downward from said seat, whereby a marginal portion of said bottom face of the bar overlaps both said seat and the next lower bar of the toy roof.

2. In a constructional toy, pilable elements adapted to simulate tile roof in a top building, comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seats at vertically spaced levels each of said seats having upstanding dowel projections and alternating with risers extending vertically between said seats, toy roof bars each having a horizontal bottom face resting on and substantially wider than the companion seats on respectively spaced walls on which the bar rests, each bar further having an edge facing the risers that extends upward from said companion seats and having an opposite edge overhanging the risers that extends downward from said companion seats, whereby a marginal portion of said bottom face of the bar overlaps the said seats and also the next lower bar of the toy roof, said bottom face of the bar having a recess spaced from both of said edges of the bar and receptive to a plurality of said dowel projections with a bar orienting fit.

3. In a constructional toy, pilable elements adapted to simulate tile roof in a toy building comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seats at vertically spaced levels each of said seats having upstanding dowel projections and alternating with risers extending vertically between said seats, toy roof bars each having a horizontal bottom face resting on and substantially wider than the companion seats on respectively spaced walls on which the bar rests, each bar further having an edge facing the risers that extend upward from said companion seats and having an opposite edge overhanging the risers that extends downward from said companion seats, whereby a marginal portion of said bottom face of the bar overlaps the said seats and also the next lower bar of the toy roof, said bottom face of the bar having a groove directed longitudinally of the bar spaced from both of said edges of the bar and receptive to a plurality of said dowel projections with a bar orienting fit.

4. In a constructional toy, pilable elements adapted to simulate tile roof in a toy building comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seats at vertically spaced levels alternating with risers extending vertically between said seats, toy roof bars each having a

horizontal bottom face resting on and substantially wider than companion seats at a common level on respectively spaced walls, each bar further having an edge facing a riser that extends upward from the seat on which said bar rests and having an opposite edge overhanging the riser that extends downward from said seat whereby a marginal portion of said bottom face of the bar overlaps both said seat and the next lower bar of the toy roof, and each bar having a top face that slants downward away from said bottom face of the next higher bar thereby to produce an angular gap between overlapping marginal portions of adjacent bars.

5. In a constructional toy, elements pilable to simulate a tile roof comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seating surfaces and intervening vertical riser surfaces, toy roof forming parallel bars horizontally wider than said seating surfaces and vertically thinner than the height of said riser surfaces spanning the space between said end walls and resting jointly on said seating surfaces of the spaced-apart walls in edgewise flanking relation to said riser surfaces, whereby an edge of one bar overhangs said seating surface on which it rests and thereby overlaps and is spaced above the next lower bar in a manner to leave a shadowed elongated nook between overlapping portions of adjacent bars.

6. In a constructional toy, elements pilable to simulate a tile roof comprising in combination with space-apart upright toy building walls having stepped tops defined by horizontal seating surfaces and intervening vertical riser surfaces, toy roof forming prismatic shaped parallel bars each having a sloping top surface, said bars being horizontally wider than said seating surfaces and vertically thinner than the height of said riser surfaces spanning the space between said end walls and resting jointly on said seating surfaces of the spaced-apart walls in edgewise flanking relation to said riser surfaces, whereby an edge of one bar overhangs said seating surface on which it rests and thereby overlaps and is spaced above said sloping top surface of the next lower bar in a manner to leave a shadowed elongated nook between overlapping portions of adjacent bars.

7. In a constructional toy, elements pilable to simulate a tile roof comprising in combination with spaced-apart upright toy building walls having stepped tops defined by horizontal seating surfaces and intervening vertical riser surfaces, toy roof forming prismatic shaped parallel bars each having a triangular profile and a sloping top surface, said bars being horizontally wider than said seating surfaces and vertically thinner than the height of said riser surfaces and spanning the space between said end walls and resting jointly on said seating surfaces of the spaced-apart walls in edgewise flanking relation to said riser surfaces, whereby an edge of one bar overhangs said seating surface on which it rests and thereby overlaps and is spaced above said sloping top surface of the next lower bar in a manner to leave a shadowed elongated nook between overlapping portions of adjacent bars.

OSCAR P. ERHARDT.

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