W. BAILEY.

BUILDING ELEMENT.

APPLICATION FILED APR. 13, 1915.

1,190,081.

Patented July 4, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

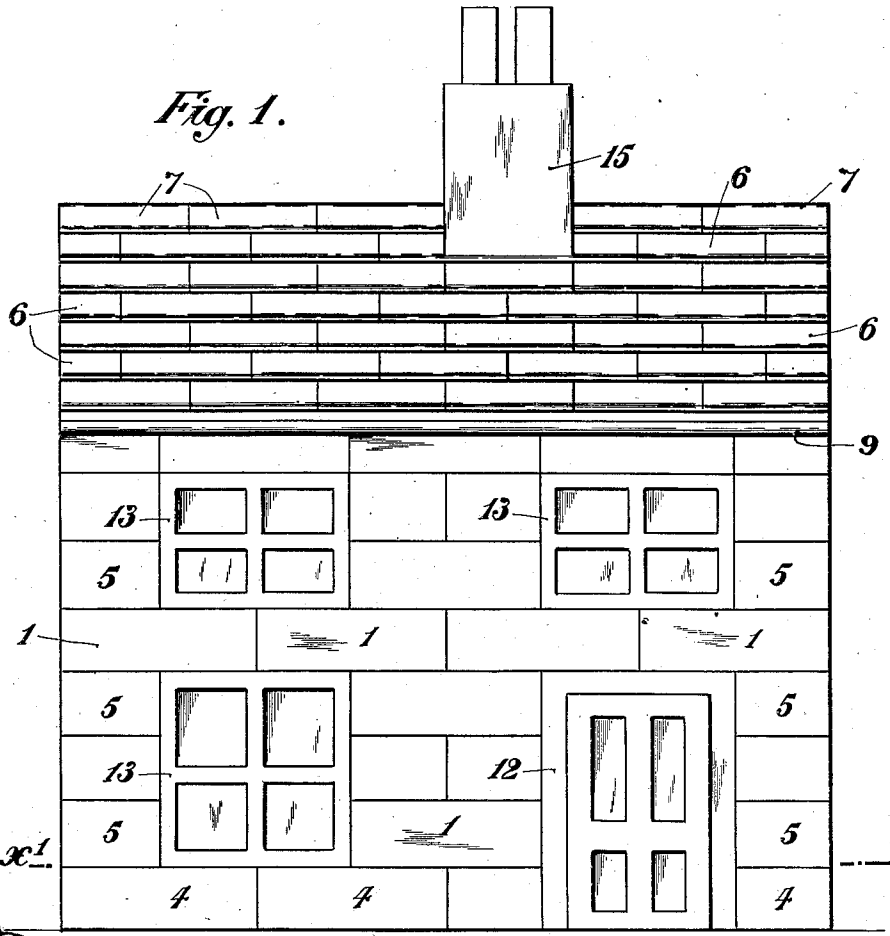


Fig. 6.

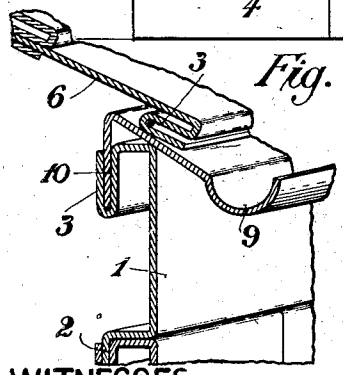
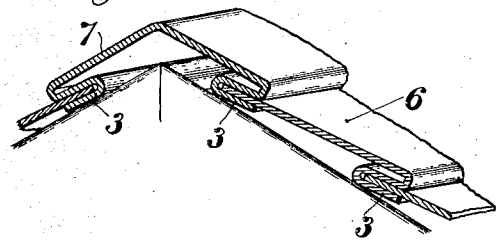


Fig. 7.



WITNESSES

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3 SHEETS—SHEET 2.

Fig. 2.

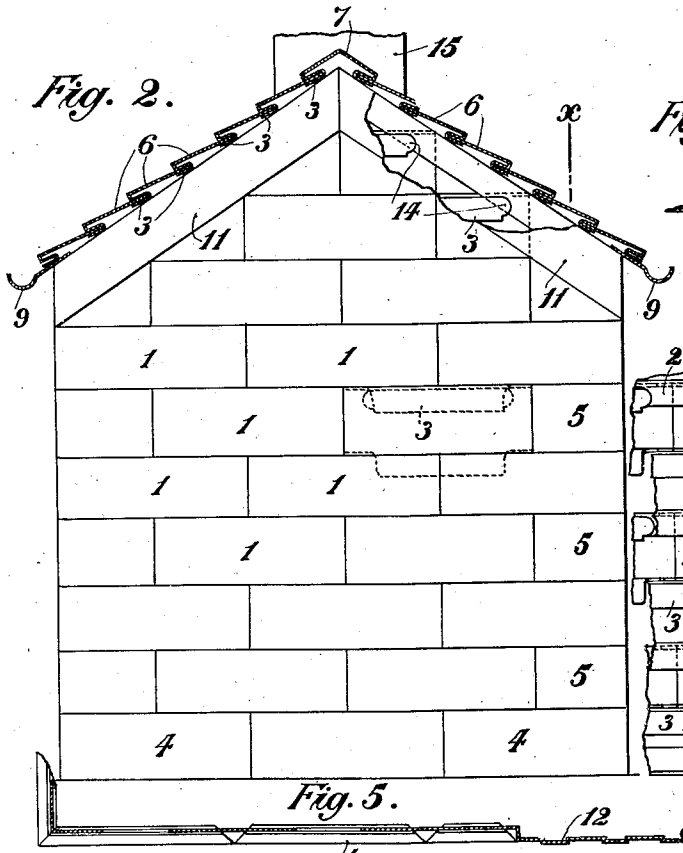


Fig. 3.

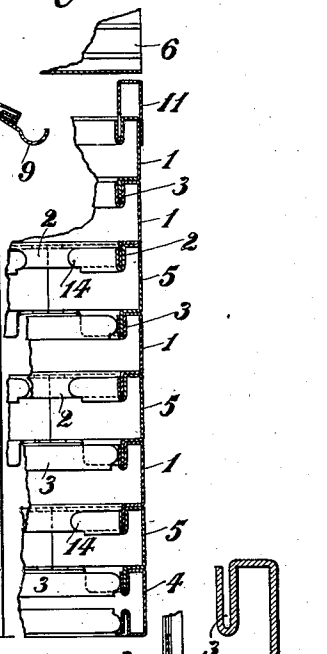
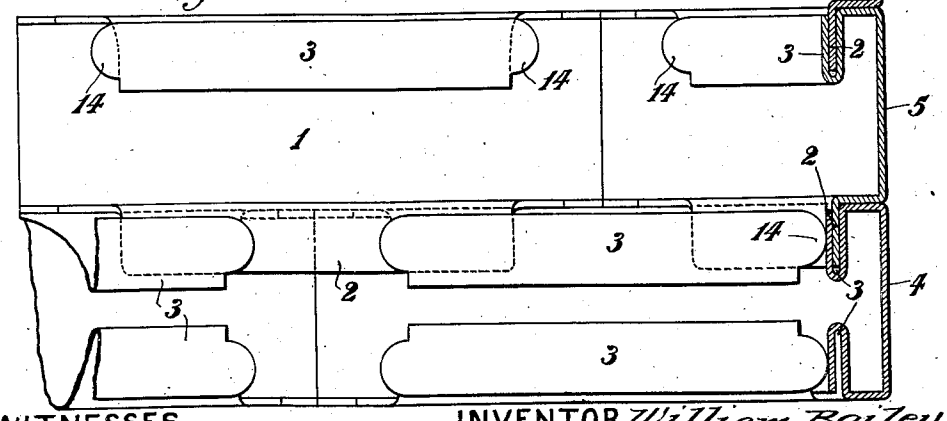


Fig. 5.

Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 8.

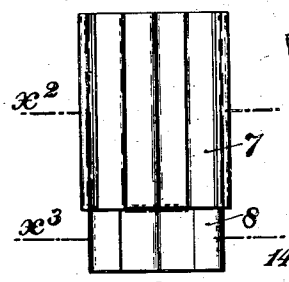


Fig. 11.

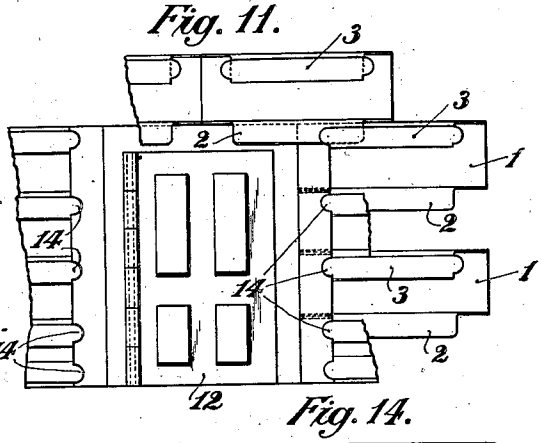


Fig. 9.

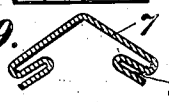


Fig. 10.



Fig. 12.

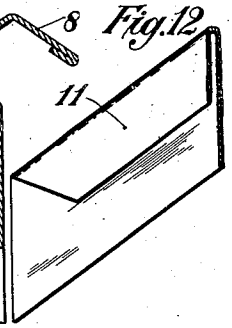


Fig. 13.

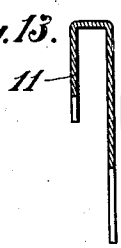


Fig. 14.

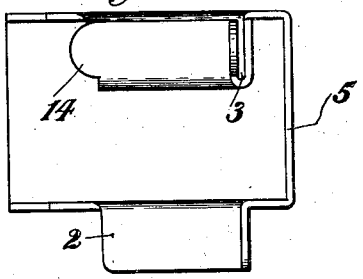


Fig. 15.

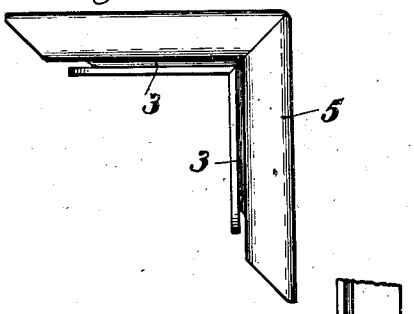


Fig. 17.

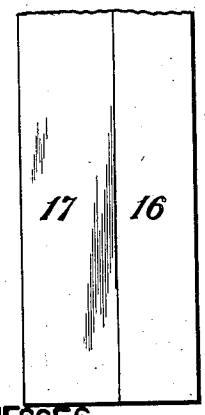
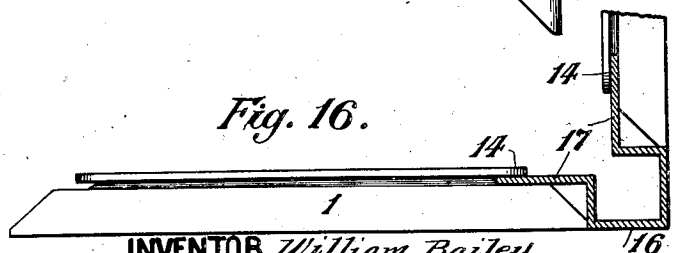


Fig. 16.



WITNESSES

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BUILDING ELEMENT.

1,190,081. Specification of Letters Patent. Patented July 4, 1916.

Application filed April 13, 1915. Serial No. 21,111.

To all whom it may concern:

Be it known that I, WILLIAM BAILEY, a subject of the King of Great Britain, residing at 213 and 215 Brearley street, Birmingham, England, have invented certain new and useful Improvements in Building Elements, of which the following is a specification.

The present invention relates to building elements for the building of toy houses or other toy structures; and also for dwelling houses, refreshment-rooms, out-houses, sheds, halls, and other erections.

The object of the invention is to provide improved building elements which are adapted to be readily interlocked or connected together, so that the resulting structure is perfectly rigid, the improved elements being preferably, especially where they are intended for the erection of toy structures, stamped from sheet metal in the form of plates or tiles, so as to give, in the case of toy structures, a realistic appearance.

The improved building elements are provided essentially with a groove, socket, or recess, upon the one side or edge, which is adapted to be engaged by a flange, tongue, or projection upon the side or edge of the next adjacent element, the elements being thus interlocked or fixed together.

Figure 1 of the accompanying drawings represents a side view of a toy house built up of elements constructed in accordance with this invention. Fig. 2 is an end view of same, shown partly in section so as to illustrate the manner in which the roof elements interlock. Fig. 3 shows a vertical section x, Fig. 2. Fig. 4 is a similar section upon an enlarged scale, showing more clearly the manner in which the sections interlock. Fig. 5 shows a horizontal section, through x^1 Fig. 1. Fig. 6 is a sectional perspective upon a larger scale, through a portion of the roof, showing the manner in which the edge of the latter rests upon the walls, and the way the spouting is fixed. Fig. 7 shows upon a larger scale, a section through the apex of the roof. Fig. 8 is a top side plan of one of the ridge tiles forming the apex of the roof. Fig. 9 is a transverse section through x^2 Fig. 8; while Fig. 10 is a section through x^3 Fig. 8. Fig. 11 is an inside elevation showing the manner in which the door frame is secured in position and interlocked with the plates. Fig. 12 is an elevation of a portion of the edging or cornice for the walls of the house. Fig. 13 is a vertical section through same. Fig. 14 shows an end view of one of the corner or angle plates employed for building up the walls. Fig. 15 is a top-side plan of same. Fig. 16 shows, in section, a corner pillar which, may be employed in lieu of the corner plates shown in Figs. 14 and 15. Fig. 17 is an elevational view of a portion of the said corner pillar.

The same reference numerals indicate corresponding parts in each of the figures.

The elements 1 forming the walls of the house are stamped from sheet metal blanks, so as to give the appearance of plates when viewed from the outside. Each of the said elements 1 is of a channel-cross-section as clearly shown in Fig. 4, and is provided upon its lower edge with a depending flange 2, while its upper edge is formed with a longitudinal groove or socket 3, formed by bending the said edge inward and then returning same outward. The groove 3 upon the upper edge of the one plate is adapted to be engaged by the flange 2 upon the lower edge of the adjacent plate the whole of the plate being, in this manner, securely interlocked or fixed together, so that the outer faces of the plates come flush or all in the same plane. The walls are preferably built up by one plate at a time, each plate being arranged to cover the joint formed by the ends of the two lower plates as shown in Figs. 1 and 2. The lower edges of the walls are fitted with edging plates 4, the said plates being formed without a flange and provided with a flat lower edge, both longitudinal edges of the plates being bent inward, as shown in Fig. 4, and formed with grooves or sockets 3, the groove or socket formed by the upper edge of the plate being engaged with the flange 2 upon the lower edge of the above adjacent plate. The walls are adapted to be connected together at right-angles by means of special corner or angle plates 5, the construction of which is clearly shown in Figs. 14 and 15 of the drawings. Each of the said plates 5 is of a right-angled formation and is provided with a flange 2 and socket 3 upon its

lower and upper edges respectively, the said flange and socket being engaged with the adjacent plates in a similar manner to the above described. The corner plates 5 are preferably employed alternately, the edges of the ordinary plates 1 coming between each corner plate, with which they are interlocked. The corners of the walls thus present an unbroken appearance, the said walls being securely fixed together at right angles to one another.

Instead of the corner plates 5 being bent at right angles they may be bent to any other angle to admit of forming octagonal, hexagonal or other shaped buildings, or for making bay windows.

The roof of the house is formed from elements stamped in the form of tiles 6, as shown in Figs. 2 and 7, the one longitudinal edge of the said tiles being adapted to socket into a groove 3 formed in the longitudinal edge of the next adjacent tile, so that the whole of the tiles are locked together. The two sides of the roof are connected together by V-shaped ridge tiles 7 which are formed with a socket 3 along each longitudinal edge which is engaged by the plain edges of the tiles 7 as shown in Fig. 7.

The tiles 7 are each formed at one end with an extension 8 (see Fig. 8) which is adapted to socket into the end of the next adjacent tile. The whole of the tiles 7 being thus secured together.

The lower edges of the roof are arranged to rest upon the top of the walls of the house, a gutter 9 being preferably interposed beneath same, the said gutter 9, being formed with a depending flange 10 which fits into the grooves or sockets in the edge of the top plates of the walls. The top edges of the end walls of the house are preferably fitted with an edging or cornice 11 the said edging being of a substantially U-section, as shown in Figs. 12 and 13, the shorter or inner side engaging behind ears 14 on the plate elements, as shown in Fig. 2.

The doors and windows of the house are preferably carried by flanged metal frames 12 and 13 respectively, the flanges of which slide behind the said projecting ears 14 which are formed integral with the socket 3 along the upper edges of the plate 1. The upper flanges or edges of the door and window frames 12 and 13 engage with the flanges upon the lower edges of the adjacent plates, while the lower edge of the window frame fits into the socket formed along the top edge of the lower adjacent plates. The house may be fitted with a chimney 15 which may, if desired be formed with sockets or flanges to engage with the adjacent tiles; or it may be secured in position in any other suitable manner.

If desired, instead of angle plates being employed for connecting together the walls of the house, corner columns 16, as shown in Figs. 16 and 17, may be employed, the said columns being formed with flanges 17 which fit behind the ears 14 upon the upper edge of the plates 1. Half-plates or tiles may be employed so that the vertical edges of the walls or roof come perfectly in line.

The invention as applied to dwelling houses, refreshment-rooms, out-houses, sheds, halls, and other erections, differs in no essential respect to the above described building elements, which may be formed from iron, being adapted to be connected together by means of a projection upon the one member engaging within a recess in the other part in a similar manner.

The building elements, when employed for the construction of either toy houses or dwelling houses or the like, may be of any suitable shape or formation, and need not necessarily be in the form of plates or tiles or the like, provided that they are adapted to be connected together by means of a projection upon one part engaging with a recess, or socket, in the other part.

Having fully described my invention, what I desire to claim and secure by Letters Patent is:—

1. A building element for constructing walls comprising a sheet metal plate having one horizontal edge bent rearward at right angles to the front face and then first bent inwardly at right angles and then outwardly to form a narrow parallel-sided socket parallel to said front face and also to form flat horizontal bearing surface to the element, the opposite horizontal edge of the element being bent inwardly to form a flat bearing surface at right angles to the front face and a plain flat tongue of single thickness parallel to the front face to engage respectively with the contiguous bearing face and with the socket of an adjacent element to form a rigid connection between the elements and render the same mutually supporting and interlocking.

2. A building element for constructing walls comprising a sheet metal plate having one horizontal edge bent rearward at right angles to the front face, and having for a portion of its length an extension which is bent first inward at right angles and then outward to form a narrow parallel-sided socket parallel to but shorter than said front face and also to form a flat horizontal bearing surface to the element, the outwardly bent side of the socket being provided at opposite ends with laterally extending ears between which and the ends of the rearwardly bent horizontal edge, a space is formed adapted to receive an adjacent part of the structure, the opposite horizontal edge of the element being bent inward to form a flat bearing surface at right angles to the front face and a plain flat tongue of single thick-

ness parallel to the front face to engage respectively with the contiguous bearing face and with the socket of an adjacent element so as to form a rigid connection between the elements and render the same mutually supporting and interlocking.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM BAILEY.

Witnesses:
HENRY NORTON SKERRETT,
WILLIAM STAILES SKERRETT.