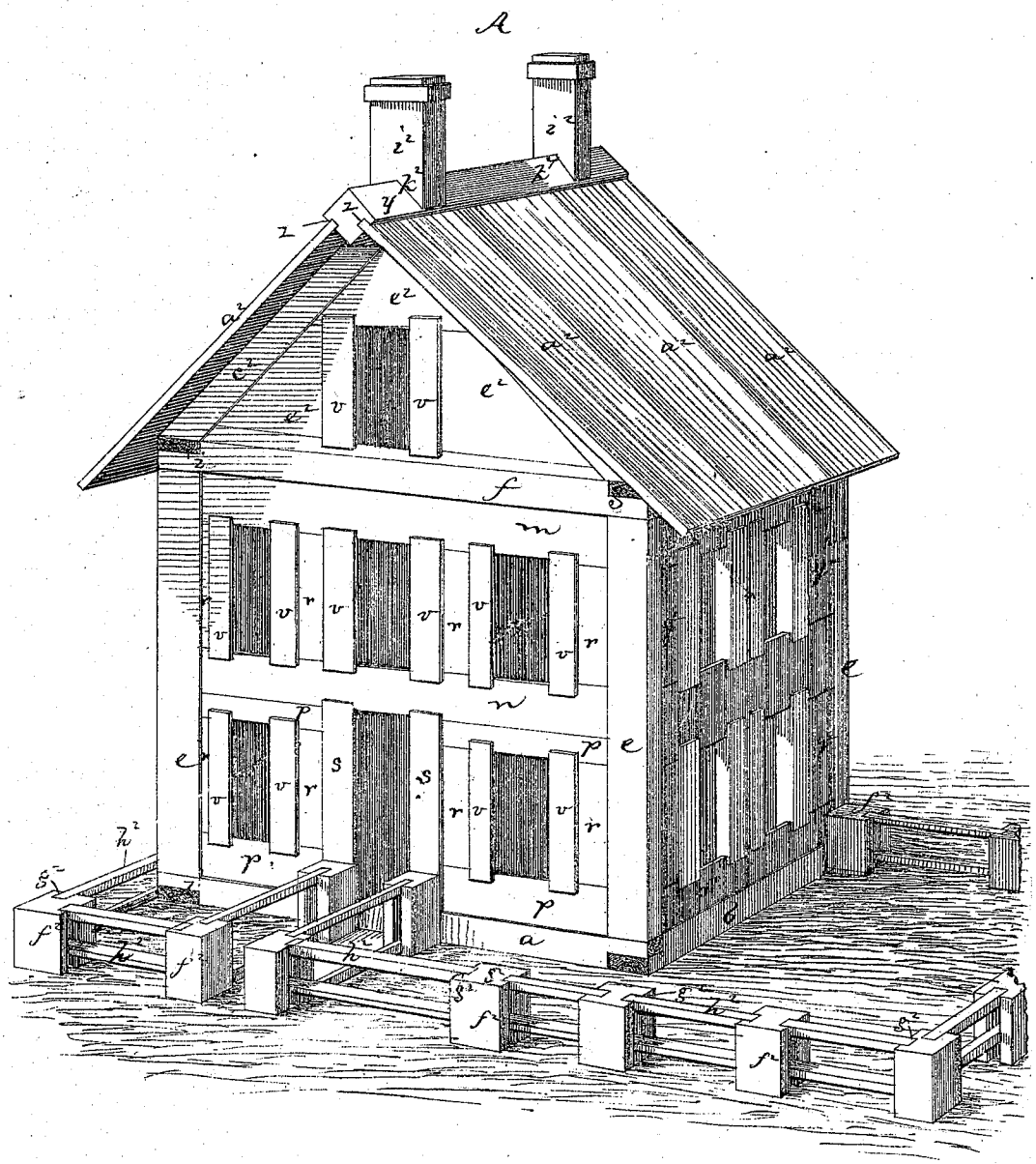
2 Sheets--Sheet 1.

C. C. JOHNSON.

Improvement in Building-Blocks for Toy-Houses.

No. 129,960. Patented July 30, 1872.



WITNESSES.
Mc. W. Frothingham.
S. B. Kidder.

Charles C. Johnson.
By his Attys.
Crosby & Gould.

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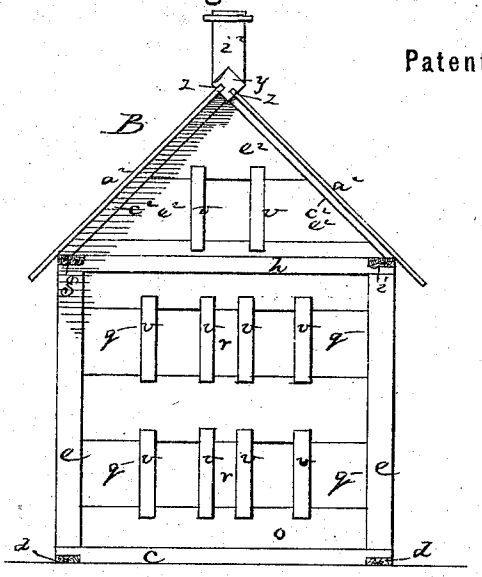

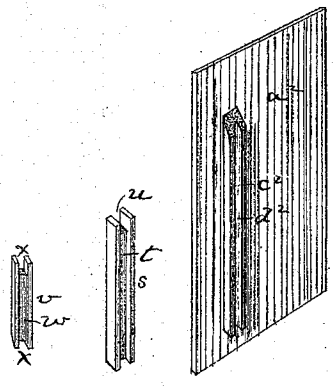

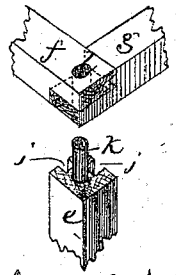

Witnesses,
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By his Attys.
Crosby & Gould

UNITED STATES PATENT OFFICE.

CHARLES C. JOHNSON, OF SOUTH GARDNER, MASSACHUSETTS.

IMPROVEMENT IN BUILDING-BLOCKS FOR TOY HOUSES.

Specification forming part of Letters Patent No. 129,960, dated July 30, 1872; antedated July 27, 1872.

To all whom it may concern:

Be it known that I, CHARLES C. JOHNSON, of South Gardner, Worcester county, Massachusetts, have invented Improved Building-Blocks for Toy Houses, &c.; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates particularly to the construction of a toy house and of building-blocks therefor, the invention being to some extent applicable, however, to the construction of larger frame buildings, formed of detachable sections for transportation and facility of erection.

For the construction of my house I employ four sill-pieces, four vertical corner-posts, and four plates corresponding to the sill-pieces, these twelve pieces constituting the main frame of the house, each end of each horizontal piece being cut half away so that any two ends will lap and match, such lapping ends being connected together and to the adjacent end of the vertical post by a pin on the end of the post, each pin securing the three parts together and in relative position to the other parts. Each part has a vertical groove on each of its two inner or adjacent sides, and into each groove fit the ends and edges of the boarding or filling pieces which compose the walls of the building. Each door or door-way and each window or window-opening is formed or bounded by two vertical pieces or posts, each grooved on one edge to receive and secure the ends of the adjacent boards, and across its top and bottom or ends each door and window-post is made with a groove to lap over or straddle the edges of the horizontal boards which extend from post to post, the locking together of the grooves and board edges and ends securing the window and door pieces in position. The horizontal sills and plates and the vertical posts, and the manner of connecting them together to form the frame, the grooving of the posts to receive the boarding, and vertical door and window-frame pieces or posts, edge-grooved and end-grooved, to receive and secure the boards and said frame-pieces in relative position, constitute the main features of the invention. The roof is formed of a square beam, set with one corner uppermost, and with its two lower faces grooved, (the same as are the frame-posts,) the ends of the roofing-boards being thrust into and confined by these grooves, each slanted end board of the roof having a grooved piece on its under side, into the groove of which extend the ends of the horizontal boards which make the end walls of the roof-space, window-pieces being applied to these boards, if desirable, the same as to the main walls below. An L, built on the same principle, may form an extension or attachment to the house, and the house may be surrounded by a fence, which will also be made up of grooved posts (similar to the main posts of the house, but shorter) and rails, the ends of the rails being thrust into and confined by the grooves of the posts.

The drawing represents a house formed of blocks or pieces in accordance with my invention.

A shows the house and surrounding fence. B is an end elevation of the house; C, a side elevation of it.

a b c d denote the four sill or bottom pieces, each cut half away to a length corresponding to the width, so that one end of each piece laps and fits to either end of another, as seen in the drawing. At the four corners of the quadrangle made by the four pieces *a b c d* are four vertical posts, *e*, and upon the tops of the posts *e* are four beams or plates, *f g h i*, corresponding to the four sill-pieces *a b c d*, all the pieces *a b c d f g h i* being alike and interchangeable. Each post *e* has projecting from each end a center or dowel pin, *k*, which fits into a hole, *l*, made in each sill-piece and plate, and the cubical frame, composed of the four sill-pieces four vertical posts, and four top plates, is held together or from spreading by the pins on the ends of the posts, each passing through the two holes of the two lapping beam-ends beneath or resting upon it. Each post is grooved on each of its inner sides, as seen at *j*, and into the two grooves that face each other in each two opposite posts the ends or edges of the wall-boards extend, there being upon each side of the house certain cross-boards or horizontal boards *m*, *n*, or *o*, which extend from post to post (their ends entering the post-grooves) on each side of the house, provided with

a door, certain shorter boards *p*, which extend from door-post to main post, their ends entering the grooves of the frame-posts and door-posts; and between each window and the adjacent frame-post, each window and an adjacent window, and each window and an adjacent door are filling-pieces *q* or *r*. Each door or door-way is composed of two posts, *s s*, formed with a groove, *t*, on one vertical face, into which groove fit the ends or edges of the adjacent filling-pieces, and a top groove, *u*, into which fits the edge of the cross-board *m*, *n*, or *o*. Similarly each vertical window-post *v* is formed with a groove, *w*, on one face, into which fits one end of a filling-piece, and with a groove, *x*, in each end, into which fits the top or bottom edge of the adjacent cross-piece. All the door-posts are alike and interchangeable, and so are all the window-posts, all the cross-pieces, *m n*, *o*, all the filling-pieces *q*, all the filling-pieces *r*, and all the cross-pieces *p*, and, by taking the house to pieces, it may be rebuilt with the doors and windows variously arranged, while no selection is necessary in using the interchangeable pieces. In the roof the ridge-pole *y* is made to be set, as shown at A, having two grooves, *z*, into which fit the upper ends of roof-boards a^2, each end one of which has a grooved piece, c^2, fastened upon its under side, said piece having a groove, d^2, for receiving one end of cross-boards e^2, which form the end of the upper part of the house, a window, made as are all the other windows, being shown as placed in each end of the roof part. If an L is added it will be formed of similar pieces, similarly connected and dissected, and for the fence short posts f^2 are used, each made with two grooves, g^2, in opposite faces, if an intermediate post, and in adjacent faces if a corner-post, and the groove may be in one face only if the post is to abut against the building, the ends of rails h^2 fitting into the grooves, as seen at A. It will be understood that all the grooves are so made that the entering ends or edges fit snugly into them, being entered or removed by simple pressure, but fitting tightly enough to hold without other fastenings. All the grooves in all the pieces are of the same width, and all the boarding of the same thickness. Of course, if a full-size building is to be made, the parts will be held together by suitable dowel-pins; but for the toy house the parts are preferably held by their simple tight fit. The roof may be surmounted by chimneys i^2, each formed with an angular recess, k^2, for straddling the top of the ridge-pole.

When taken apart the pieces pack snugly together in a suitable box, and as some skill is required to form the structure from the pieces, and the building, when erected, is quite strong and rigid, and has a really practical construction, the invention is useful as a toy, not only to afford amusement but to instruct the mind of a child.

I claim—

1. The frame made of the four sill-pieces *a b c d*, four plates, *f g h i*, and four grooved posts, *e*, each post having a pin, *k*, at each end to connect the posts and plates and sills together, substantially as shown and described.

2. In combination with the frame-sills, plates, and grooved posts, the cross-boards *m n o*, the filling-pieces *q r*, and the cross-boards *p*, held in position, in whole or in part, by the grooves in the posts, substantially as shown and described.

3. The door-posts *s s* and window-posts *v*, each having an edge groove, *t* or *w*, and end grooves *u* or *x*, for receiving the edges of the cross and filling boards, substantially as shown and described.

4. The roof formed of the grooved detachable ridge-pole *y*, roof-boards a^2, and end boards c^2, connected together substantially as shown and described.

5. The fence formed of the grooved posts f^2 and rails h^2, connected and separable, substantially as shown and described.

CHARLES C. JOHNSON.

Witnesses:

FRANCIS GOULD,

M. W. FROTHINGHAM.