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W. E. BROCK.

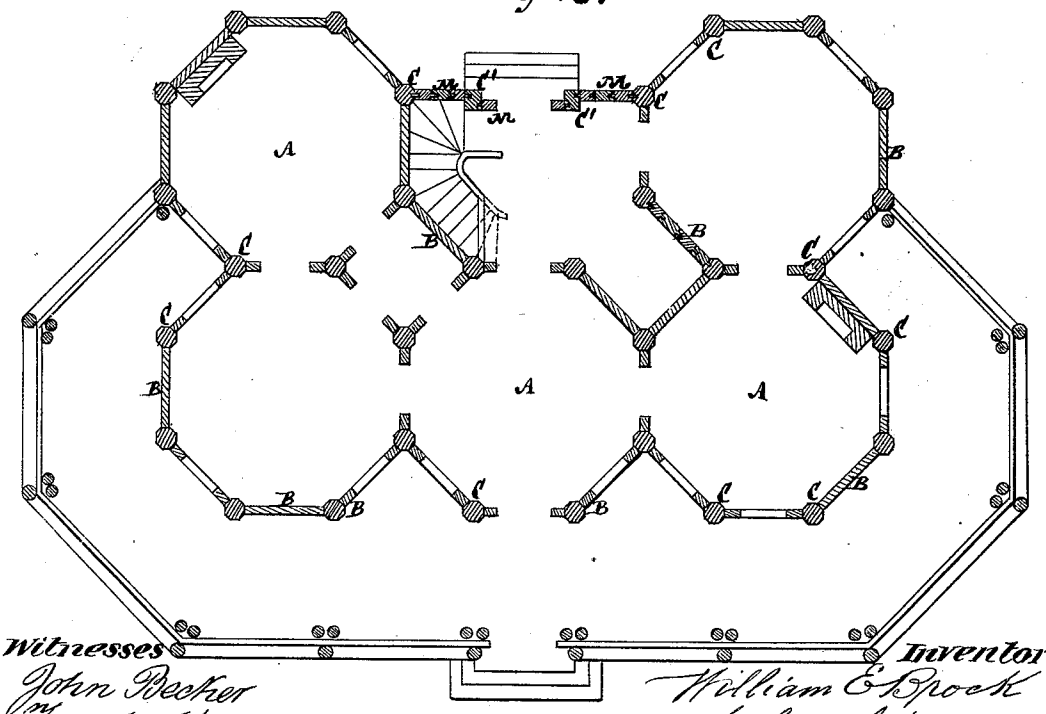
Building.

No. 217,984. **Patented July 29, 1879.**

Fig. 1.



Fig. 2.



Witnesses
John Becker
by Brock Haynes

Inventor
William E. Brock
by his Attorneys
Brown & Brown

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

2 Sheets—Sheet 2

W. E. BROCK.

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Fig. 6.

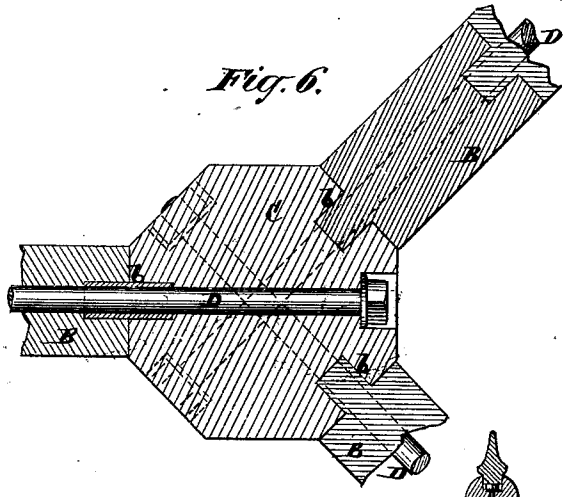


Fig. 5.

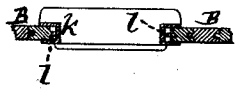
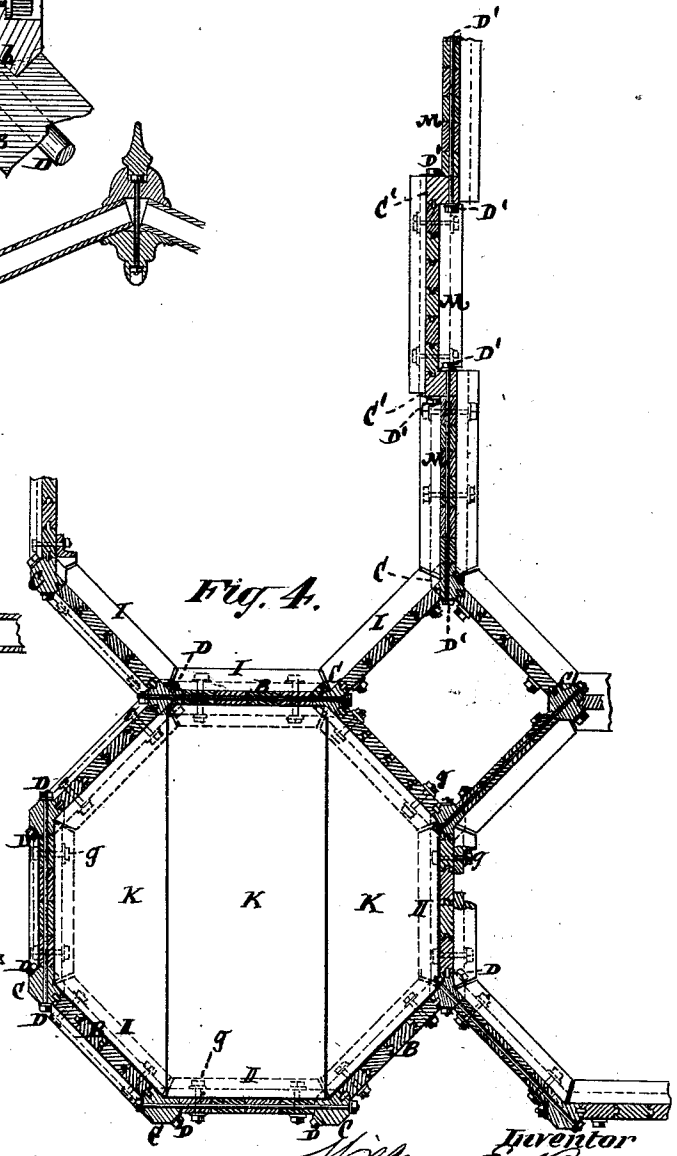


Fig. 3.

Fig. 4.



Witnesses
John Becker
Fred K. Hayner

Inventor
William E. Brock
by his Attorneys
Brown & Brown

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. BROCK, OF NEW YORK, N. Y.

IMPROVEMENT IN BUILDINGS.

Specification forming part of Letters Patent No. **217,984**, dated July 29, 1879; application filed April 28, 1879.

To all whom it may concern:

Be it known that I, WILLIAM E. BROCK, of the city and State of New York, have invented new and useful Improvements in Buildings, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The invention consists in the combination of sectionally-constructed side walls and intervening polygonal-shaped posts, with which said side walls connect, and to which said side walls are secured by bolts passing through and under cover of them, and in which certain of said posts are so arranged in relation to the side walls as to form a group of octagonal and rectangular apartments, said walls connecting with the posts on three different sides, thus effectually bracing the posts, the bolts which secure the side walls to the posts being arranged to pass centrally in a transverse direction through the latter; and the invention further consists in a sectionally-constructed wall, formed of a series of posts and panels connecting the posts, and arranged out of line, but in parallel relation with each other, and bolts passing through the posts and panels for securing and tightening up said panels.

In the accompanying drawings, Figure 1 represents a front elevation of a frame house constructed in accordance with my invention. Fig. 2 is a ground plan of the same. Fig. 3 is a transverse sectional elevation, in part, of said building; Fig. 4, a horizontal section, in part, of the same; Fig. 5, a horizontal section through one of the window-frames; Fig. 6, a transverse section, upon a larger scale, of one of the posts, having side walls connected therewith, and bolts for securing and tightening up the latter.

The house represented in the accompanying drawings is made up of a series of octagonal-shaped rooms or apartments, A, having side walls, B B, separated by posts C C, into which said side walls are mortised, or with which they are otherwise suitably connected. These posts and side walls are so constructed and arranged in relation to each other that the posts, which are preferably of the same shape in their transverse section as the apartments, project beyond the faces of the side walls at the angular junctions of the latter with the posts, as shown in Figs. 2, 4, and 6 of the drawings. Said side walls may be connected with the posts by tongue-and-groove upright joints *b*, and are secured to the posts and tightened up from time to time, as required, by screw-bolts D D, arranged to pass within and through the sides or side walls, thus preventing their exposure, and through each next adjacent pair of posts, from the exterior of which said bolts are adjustable. In this way each side wall is separately secured to the posts between which it is arranged, and each post answers for more than one side wall, as clearly shown in Figs. 2, 4, and 6.

By the arrangement of the screw-bolts D, which connect each pair of adjacent posts, through or within the side walls, and in intersecting line with the joints which the latter make with the posts and with the joints which the boards composing each wall-section form with one another, there is no tendency of said joints to gape on either the inside or outside faces of said walls, and a direct pull in line with the walls is obtained when tightening up the screw-bolts. This is not the case when the bolts connecting the posts are arranged on one side of but do not pass through the walls. Such arrangement, however, of the screw-bolts in relation with the side walls and intervening posts is not here separately claimed; but in a building having octagon-shaped apartments, and in which certain of the intervening polygonal-shaped posts are arranged in relation with the side walls, so that the latter connect with the posts on three different sides, as more clearly shown in Fig. 6 of the drawings, such arrangement of the bolts D causes the latter to intersect said posts C through their center, and said posts are braced on three of their sides, which effectually keeps them upright or prevents them from tilting to any one side.

E is the base of the house, secured by bolts (see Fig. 3) to any suitable foundation, and having the posts C secured to it by bolts *c* and knees *d*.

Each upper apartment A has a separate roof composed of pyramidal-shaped sections F, corresponding to the shape of the apartment, and secured by bolts and knees G to the posts C, as shown in Fig. 3. These sections,

which may be bolted together, should have an elastic or flexible packing introduced between them to provide for the yielding of said sections when tightening up the side walls.

The side walls, B, or certain of them, are stiffened externally by bracket-like strips or braces H, which also serve to support a veranda outside of the building, as shown in Fig. 3. Said walls are likewise stiffened internally by bracket-like strips or braces I, disconnected from one another, as shown in Fig. 4, to provide for the tightening up of the side walls. These strips I also serve to support the floors, or floors and ceilings, of the apartments.

The windows of the house have their frames *k* (see Fig. 5) made hollow, and are fitted to receive within them tongues *l*, formed on the sides or side walls, B, whereby separated spaces are provided for the weights which counterbalance the upper and lower sashes of the windows.

In Figs. 2 and 4 is represented a sectionally-constructed wall, which may connect certain of the apartments, and which is formed of a series of posts, C C′, panels M, arranged out of line but in parallel relation with each other, and screw-bolts D′ passing through the posts and panels, and providing, by the irregular but parallel relation of the panels, for the separate tightening up of the latter, as in the case of the sides or side walls, B B, of the house.

I am aware that frame buildings have before been constructed with side walls composed of tongued and grooved sections held together by bolts running through said sections; likewise, that intersecting posts have been combined with tongued and grooved wall sections, and bolts for drawing up said sections been arranged to connect said posts externally of the wall-sections. Such, therefore, I do not separately claim.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with the sectionally-constructed side walls, of a series of polygonal-shaped posts supported by and arranged to connect on three of their sides with said side walls to form a group of octagonal and rectangular apartments, as shown, and bolts for securing said side walls to said posts, arranged to pass within the side walls and centrally in a transverse direction through the posts, substantially as specified.

2. The sectionally-constructed wall, composed of a series of posts, C C′, panels M M, connecting the posts, and arranged out of line but in parallel relation with each other, and bolts D′, arranged to pass within or through said panels and posts, and adjustable from the exterior of the latter, substantially as specified.

W. E. BROCK.

Witnesses:
T. J. KEANE,
FREDK. HAYNES.