Sept. 5, 1950 P. A. LINCK 2,521,381

PREFABRICATED BUILDING

Filed Oct. 19, 1945 4 Sheets-Sheet 1

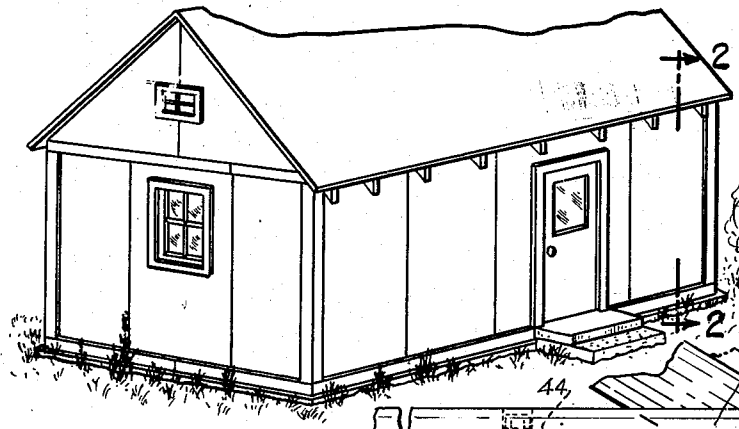


Fig. 1.

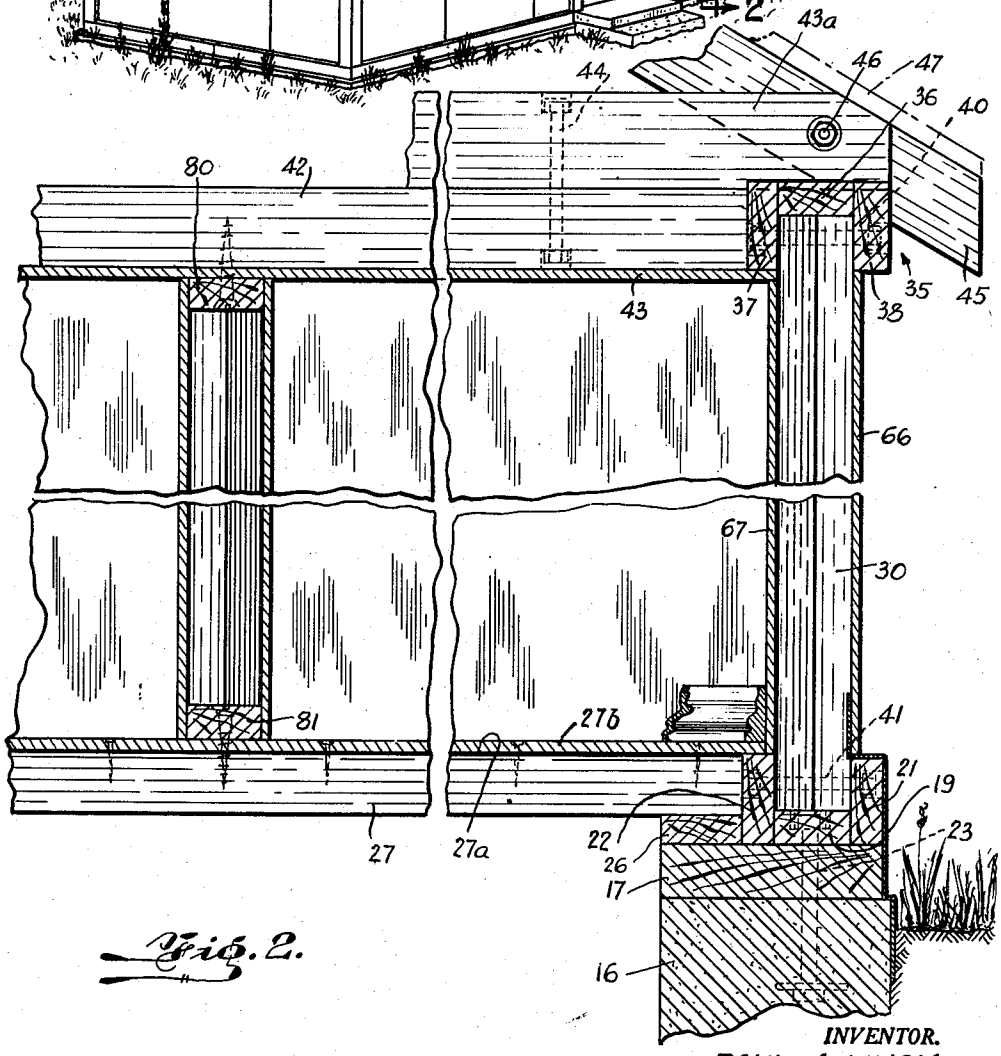


Fig. 2.

INVENTOR.
PAUL A. LINCK.
BY Carey Freeman
ATTORNEY.

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PREFABRICATED BUILDING

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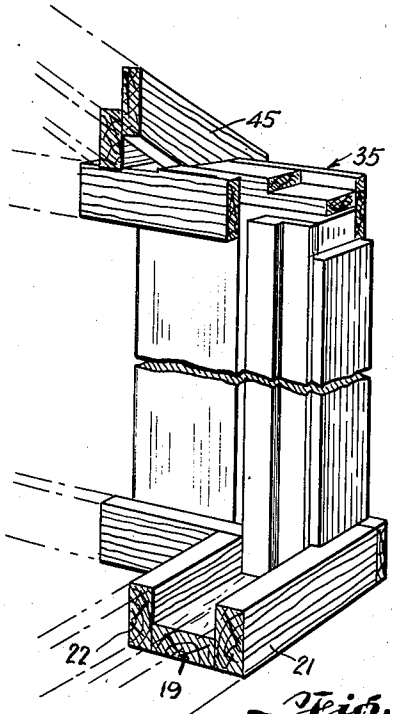


Fig. 3.

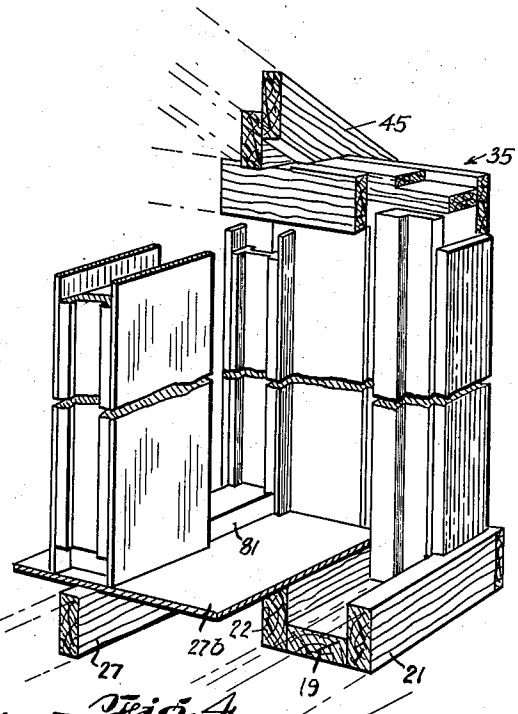


Fig. 4.

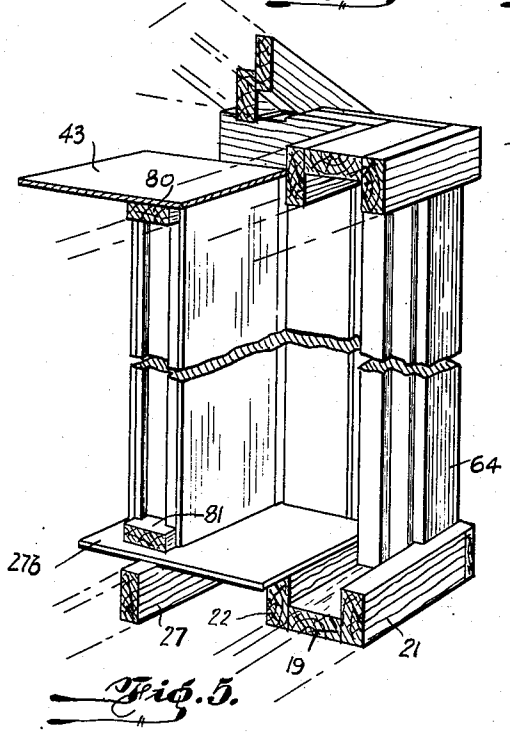


Fig. 5.

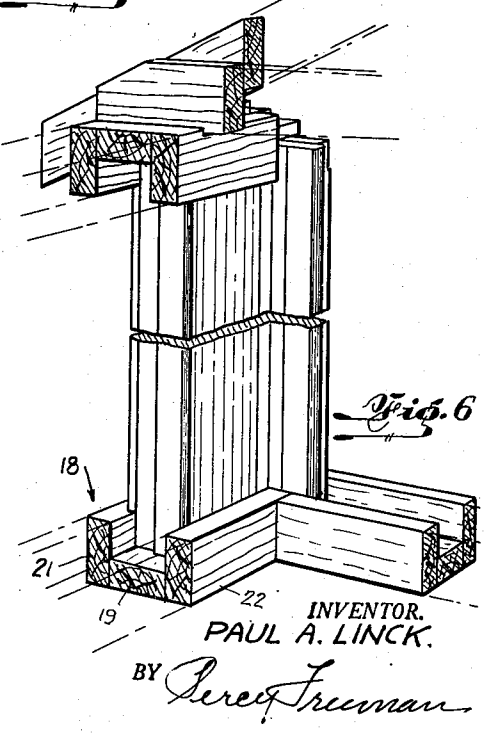


Fig. 6

INVENTOR.
PAUL A. LINCK.
BY Percy Freeman
ATTORNEY.

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PREFABRICATED BUILDING

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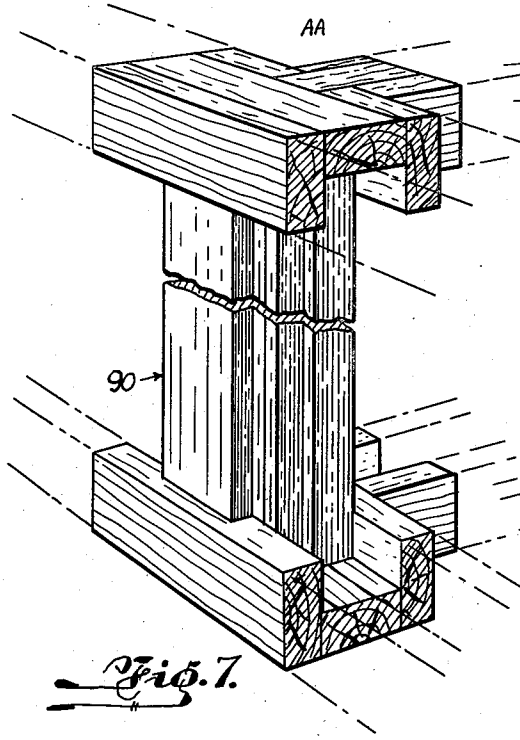


Fig. 7.

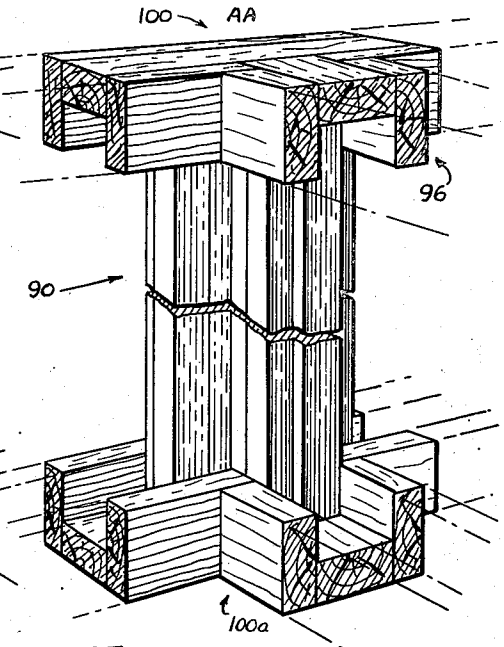


Fig. 8.

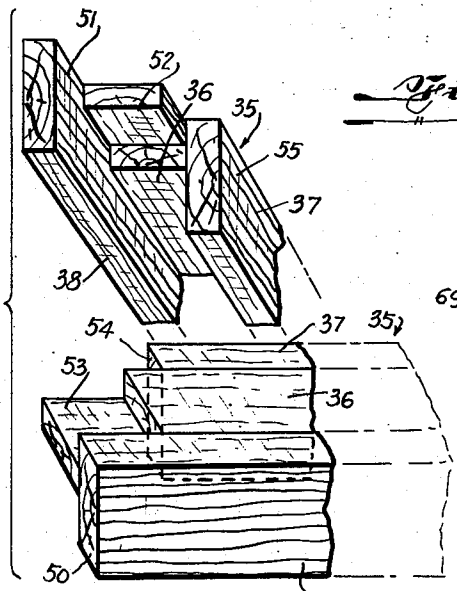


Fig. 9.

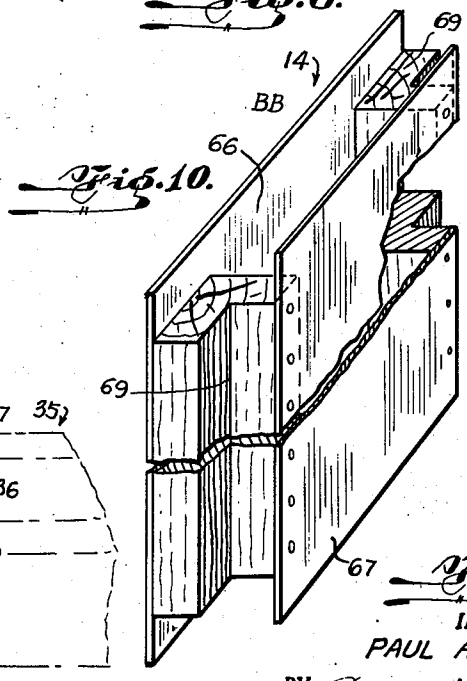


Fig. 10.

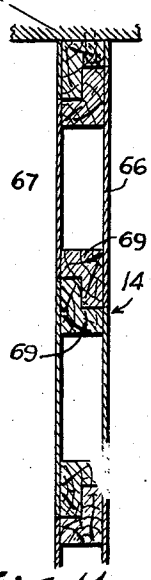


Fig. 11.

INVENTOR.
PAUL A. LINCK.
BY Percy Freeman
ATTORNEY.

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PREFABRICATED BUILDING

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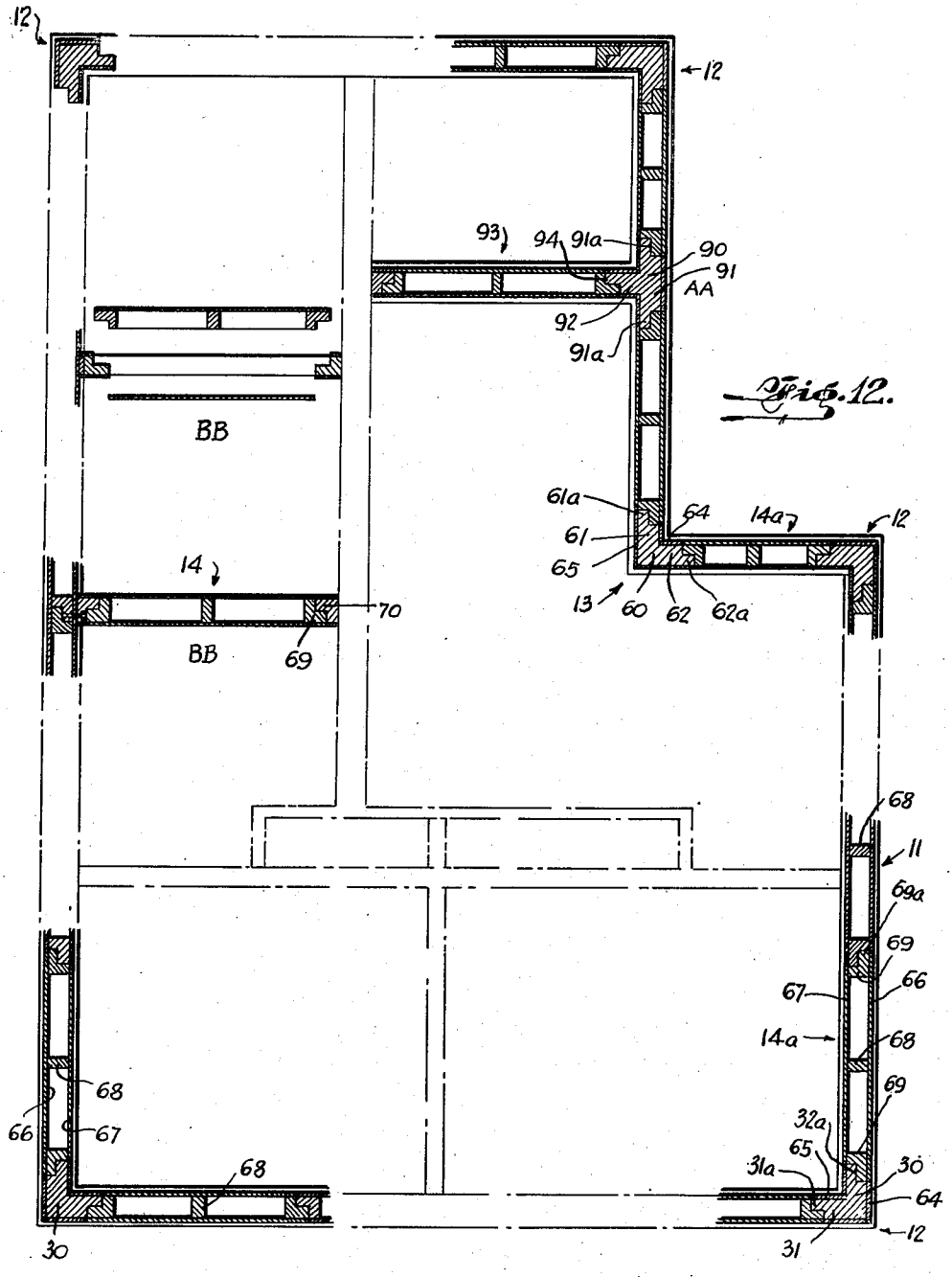


Fig. 12.

INVENTOR.
PAUL A. LINCK.
BY Jerry Freeman
ATTORNEY.

Patented Sept. 5, 1950

2,521,381

UNITED STATES PATENT OFFICE

2,521,381

PREFABRICATED BUILDING

Paul A. Linck, Flushing, N. Y.

Application October 19, 1945, Serial No. 623,332

3 Claims. (Cl. 20—2)

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This invention relates to prefabricated houses.

An object of this invention is to provide a prefabricated house which may be assembled wholly from prefabricated parts, including outer walls, inner partitions, ceilings, floors, rafters and roofing, the parts being so arranged that they may be attached together by bolts, screws and the like fastening means.

Another object of this invention is to provide in a building of the character described, inner panels or partitions which may be disassembled and removed so as to permit changing positions of partitions within the building.

Yet another object of this invention is to provide in a prefabricated building of the character described, top and bottom channels opening toward each other and posts having their upper and lower ends received in said channels.

A further object of this invention is to provide in a building of the character described, partitions or panels comprising inner and outer wall boards and posts between said wall boards, said partitions at the ends thereof being provided with posts of angle-shaped cross section adapted to interfit with the angle-shaped complementary posts on the walls of the building.

Still a further object of this invention is to provide a strong, rugged and durable building construction of the character described which shall be relatively inexpensive to manufacture, and which shall yet be practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawings, in which are shown various possible illustrative embodiments of this invention:

Fig. 1 is a partial perspective view of a prefabricated building embodying the invention.

Fig. 2 is an enlarged cross-sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a partial perspective view illustrating a corner of the building.

Fig. 4 is a view similar to Fig. 3, but showing the structure of Fig. 3 with some flooring and partitioning added.

Fig. 5 is a view similar to Fig. 4, but showing part of the ceiling added and part of a top channel added to the structure of Fig. 4.

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Fig. 6 is a perspective view of a corner of the building.

Fig. 7 is a partial perspective view showing a joint between an outside building wall and a partition.

Fig. 8 is another perspective view of the structure shown in Fig. 7.

Fig. 9 is a perspective view showing the meeting ends of two top channels.

Fig. 10 is a perspective view of a portion of a partition.

Fig. 11 is a transverse cross-sectional view of a partition.

Fig. 12 is a horizontal cross-sectional view through a building embodying the invention.

Referring now in detail to the drawing, 10 designates a building embodying the invention. The same comprises outer walls 11, outer corners 12, inner corners 13, and partitions 14. The building may be provided with concrete abutment foundations 16. On the abutment 16 may be laid boards 17 as shown in Fig. 2 of the drawing. Supported on boards 17 are bottom channels 18, each comprising a bottom web 19 and parallel upwardly extending outer and inner flanges 21 and 22. The flanges 21, 22 may be fastened to the bottom wall 19 by screws, bolts, nails or the like fastening means. The bottom channels may be bolted to the abutments 16 by means of suitable bolts 23.

On the boards 17 and contacting the inner walls 22 of the bottom channels 18 are planks 26. Mounted on planks 26 are the horizontal floor beams 27. The upper edges 27*a* of the beams 27 are at the level of the upper edges of flanges 21, 22 of the bottom channels 18. Supported on the floor boards 27 are flooring boards 27*b* contacting also the upper edge of the inner flanges 21.

Supported on the bottom channels 18, at the outer corners 12, are the corner posts 30. The lower ends of the corner posts project into the bottom channels. Each corner post 30 comprises portions 31 and 32 extending at right angles to each other and formed with extending inner vertical flanges 31*a*, and 32*a* respectively.

Receiving the upper ends of posts 30 are top channels 35 each comprising a top web 36 and side flanges 37 and 38. Posts 30 may be attached to the top and bottom channels by horizontal transverse bolts 40 and 41, respectively. Contacting the inner flanges 37 of the top channels are the ceiling beams 42. Attached to the underside of the ceiling beams 42 are ceiling boards 43. Supported by the top channels 35 are top tie

beams 43a which may be bolted to the ceiling boards 42 by bolts 44. Attached to the tie beams 43a are inclined rafters 45 bolted thereto by bolts 46. The rafters 45 support the roofing boards 47.

In Fig. 9 there are shown the meeting ends of a pair of top channels 35 and showing the method of joining such top channels to one another at right angles to form a right angle channel groove to receive the upper end of a corner post. Flange 38 of one top channel has an end surface 50 which abuts the end portion of the inner surface of wall 38 of the other top channel as at 51. The top webs 36 of the two top channels have interfitting superimposed flanges 52 and 53. The inner flange 37 of one top channel has an end surface 54 which abuts the inner surface of the inner flange 37 of the other top channel, as at 55. The two top channels thus interfit and may be attached together by any suitable fastening means. The joint illustrated in Fig. 9 is, of course, carried out at the various corners of the building, not only by the top channels but also by the bottom channels. The top channels and the bottom channels have similar right angle joints and thus form right angular grooves at top and bottom to receive the corner posts 30 at the outer corners 12, as well as at the inner corner 13 to be described in detail hereinafter.

At the inner corner 13 there is a vertical corner post 60, the upper and lower ends whereof are also received in right angle grooves formed in the top and bottom channels. The corner post 60 likewise has right angular portions 61 and 62 formed with extending flanges 61a and 62a.

Contacting the outer and inner surfaces of posts 30 and 60 are vertical planks 64 and 65 which abut the edges of the flanges of the top and bottom channels. The outer walls 11 of the building may be made up of panels 14a of any desired length, similar to the partitions 14. Each panel 14a comprises an outer wall board 66, an inner wall board 67, and a central vertical spacing post 68 therebetween. The wall board 67 is of less width than the wall board 66. At the ends of the panel are vertical angle posts 69 likewise interposed between said wall boards, and each is formed with an outwardly extending flange 69a contacting and extending to the edges of wall board 66. The outer wall boards 66 extend to the ends of the flanges 69a and are, therefore, longer than the inner wall boards 67. Where an outer wall comprises a number of panels 14, the panels are reversed so that the flanges 69 of adjacent panels interfit. In such case the inner wall boards are longer than the outer wall boards as shown at the right side of Fig. 12.

The wall boards 66, 67 contact the edges of the flanges of the top and bottom channels. Such wall boards, furthermore, extend to the inner and outer planks 64, 65. The angle posts 69 furthermore interfit with the flanges 31a, 32a, 61a, and 62a of the corner posts 30 and 60.

The partitions 14 are similar in construction to the wall panels 14a. At the ends of the partitions 14 are angle-shaped posts 70 interfitting with the angle-shaped members 69. The angle-shaped posts 70 may be attached to either outer walls or to other partitions so as to provide a flush wall. It will be noted that the angle-shaped members 69, the spacing post 68, and the angle-shaped member 70 of either the partitions 14 or wall panels 14a, are of less height than the wall boards 66 and 67. Attached to the underside of the ceiling boards 43 and the floor boards 27b are top and bottom planks 80 and 81, respectively, which interfit between the wall boards 66, 67 and contact the upper and lower ends of the angle posts 69, spacing posts 68, and angle posts 70.

All the various parts described herein may be interconnected by screws, bolts or other fastening means as desired.

In Fig. 12, there is shown an intermediate post 90 which may be used at a junction between the outer wall and a partition of the building. The post 90 comprises a portion 91 in the plane of the outer wall and formed with outwardly extending vertical flanges 91a. Extending at right angles to the post portion 91 is a post portion 92 in alignment with a partition 93 similar to partition 14 and extending at right angles to the outer wall. Portion 92 is formed with a vertical flange 94. The flanges 91a interfit with angle posts 69 of wall panels 14a as heretofore described. The flange 94 interfits with an angle post 69 on the partition 93 as described hereto. The upper and lower ends of the post 90 are received in top and bottom channels in the same manner as heretofore described. It will be noted that the top and bottom channels do not only extend along the outer walls of the building, but as shown in Figs. 7 and 8, may extend along the main partitions of the house. Thus both the portions 91 and 92 of the corner posts 90 may be received in top and bottom channels forming T-connections 100, 100a and having T-shaped grooves to receive said posts, as shown in Figs. 7 and 8.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A prefabricated house comprising top and bottom channels, corner posts having the ends thereof received in said channels and formed with flanges, and panels each comprising outer and inner boards, and angle posts between said boards interfitting with the flanges of said corner posts, floor beams extending between and having their ends abutting against the sides of said bottom channels, flooring on said floor beams, ceiling beams extending between and having their ends abutting against the sides of the top channels, and ceiling boards at the underside of the ceiling beams.

2. In a prefabricated building, a pair of interfitted bottom channels opening upwardly and forming a corner groove, a pair of interfitted top channels opening downwardly and forming a corner groove, and a corner post having vertical portions extending at right angles to each other, the ends of said corner post being received within the corner grooves of said top and bottom channels, said corner posts being formed with vertical flanges, outer wall panels comprising outer and inner wall boards, and angular posts between the wall boards interfitting with the flanges of said corner posts.

3. A prefabricated building comprising top

channels opening downwardly, and bottom channels opening upwardly, said channels extending around the outer contour of the building, inner and outer corner posts, the ends whereof are received between said channels and disposed at the inner and outer corners of the building, wall panels interposed between said corner posts, said corner posts and panels having interfitted portions, floor beams having their ends attached to the sides of said bottom channels, and flooring on said floor beams and contacting upper edge portions of said bottom channels, ceiling beams having their ends attached to the sides of said top channels, and ceiling boards attached to the underside of the ceiling beams and contacting lower edge portions of said top channels.

PAUL A. LINCK.

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