March 19, 1946. M. H. CARPENTER 2,396,829

BUILDING CONSTRUCTION

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Fig. 1.

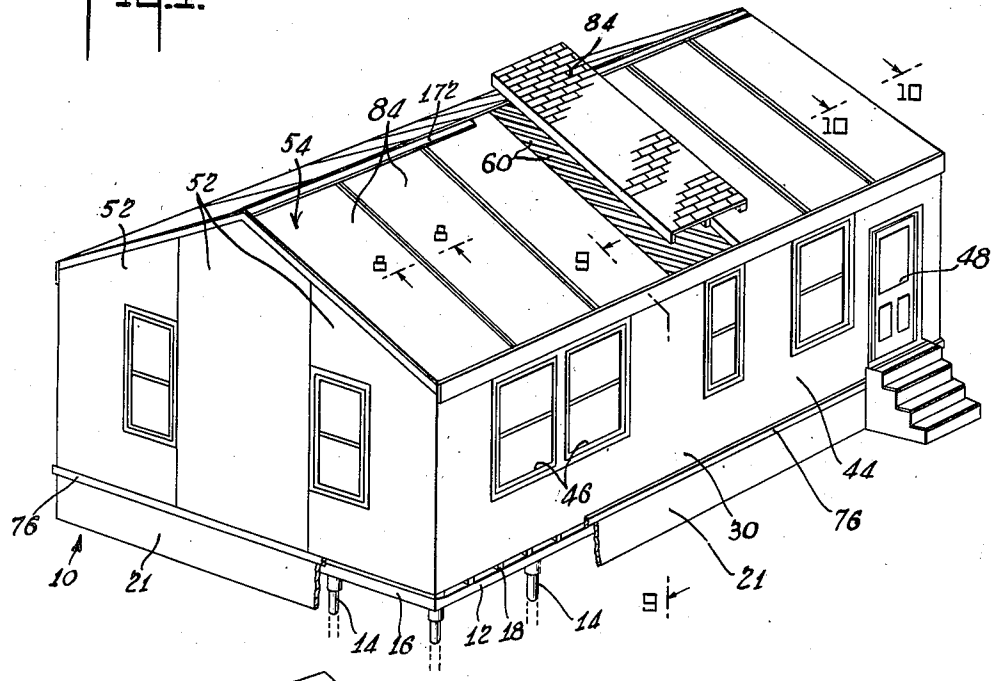
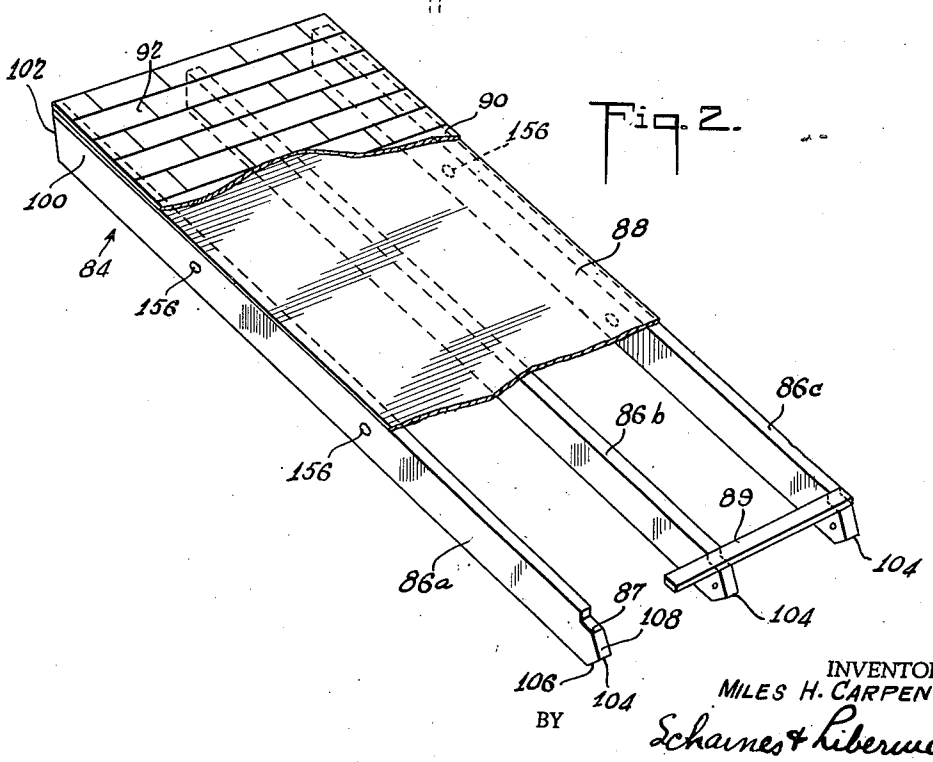


Fig. 2.



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BUILDING CONSTRUCTION

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Fig. 3.

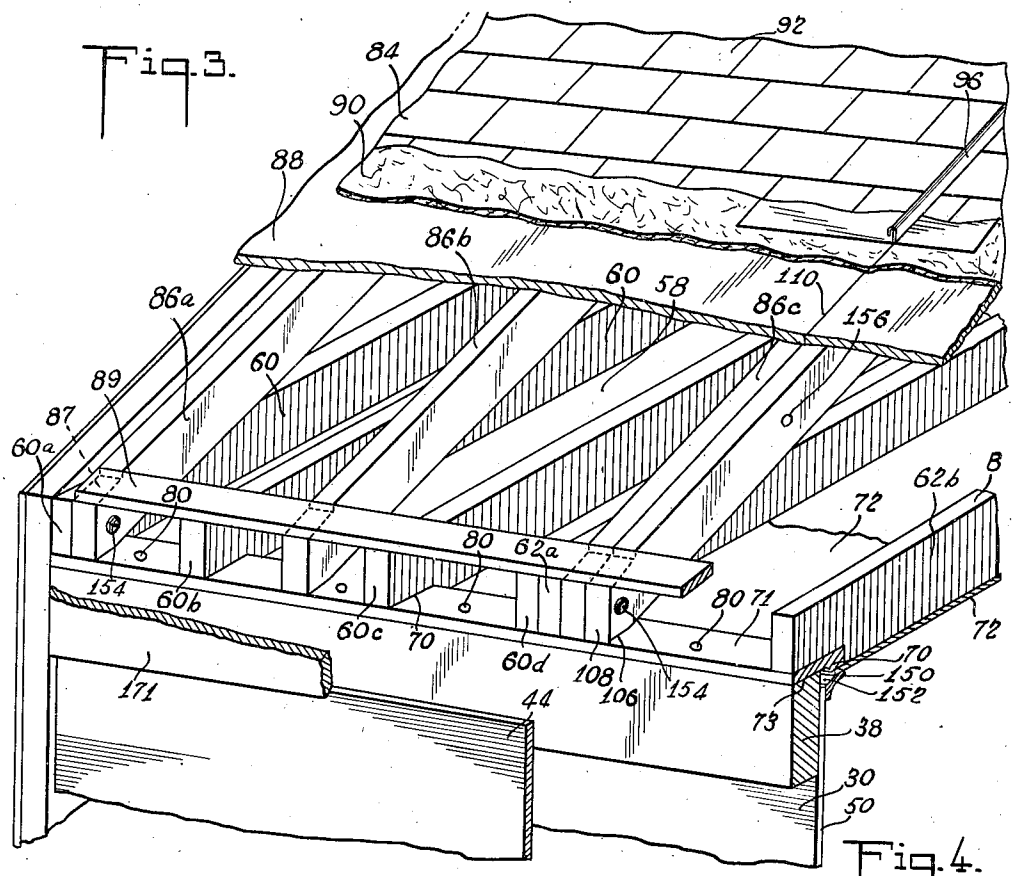
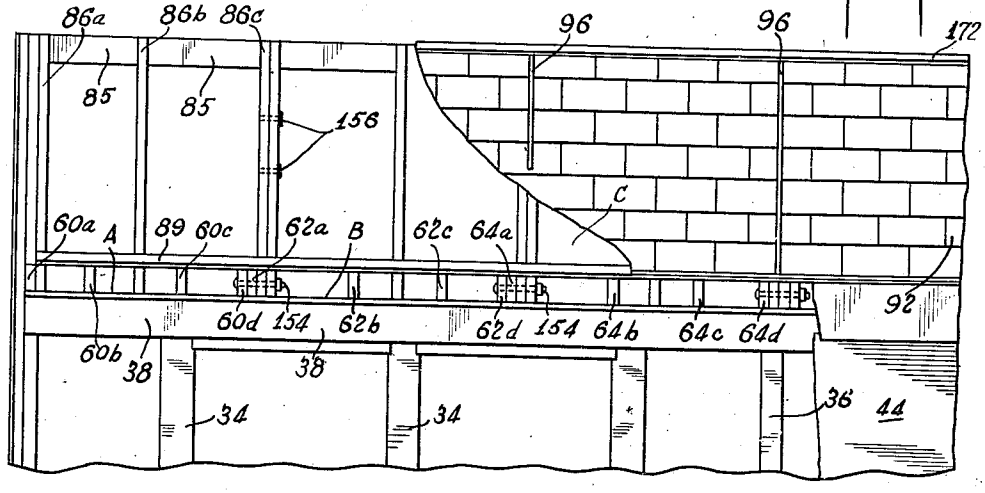


Fig. 4.



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BUILDING CONSTRUCTION

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Fig. 5.

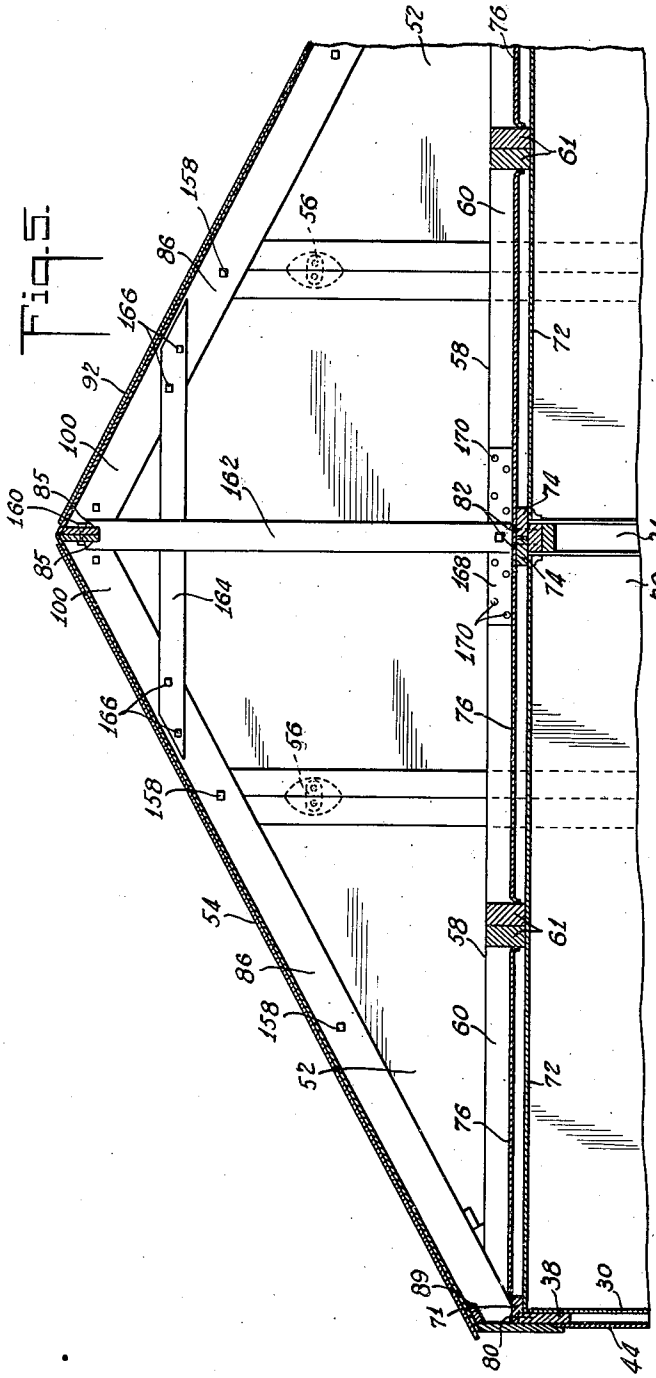


Fig. 7.

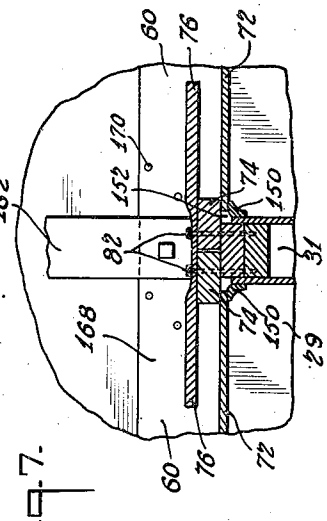
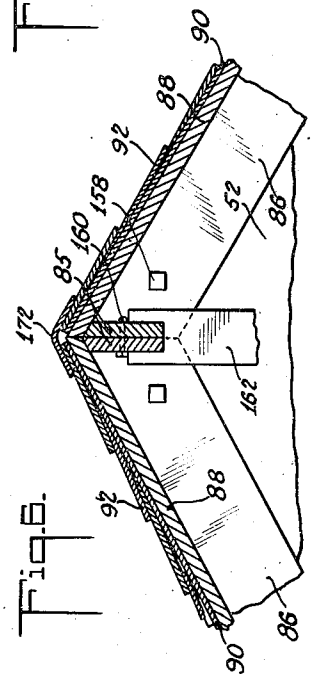


Fig. 6.



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BUILDING CONSTRUCTION

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Fig. 9.

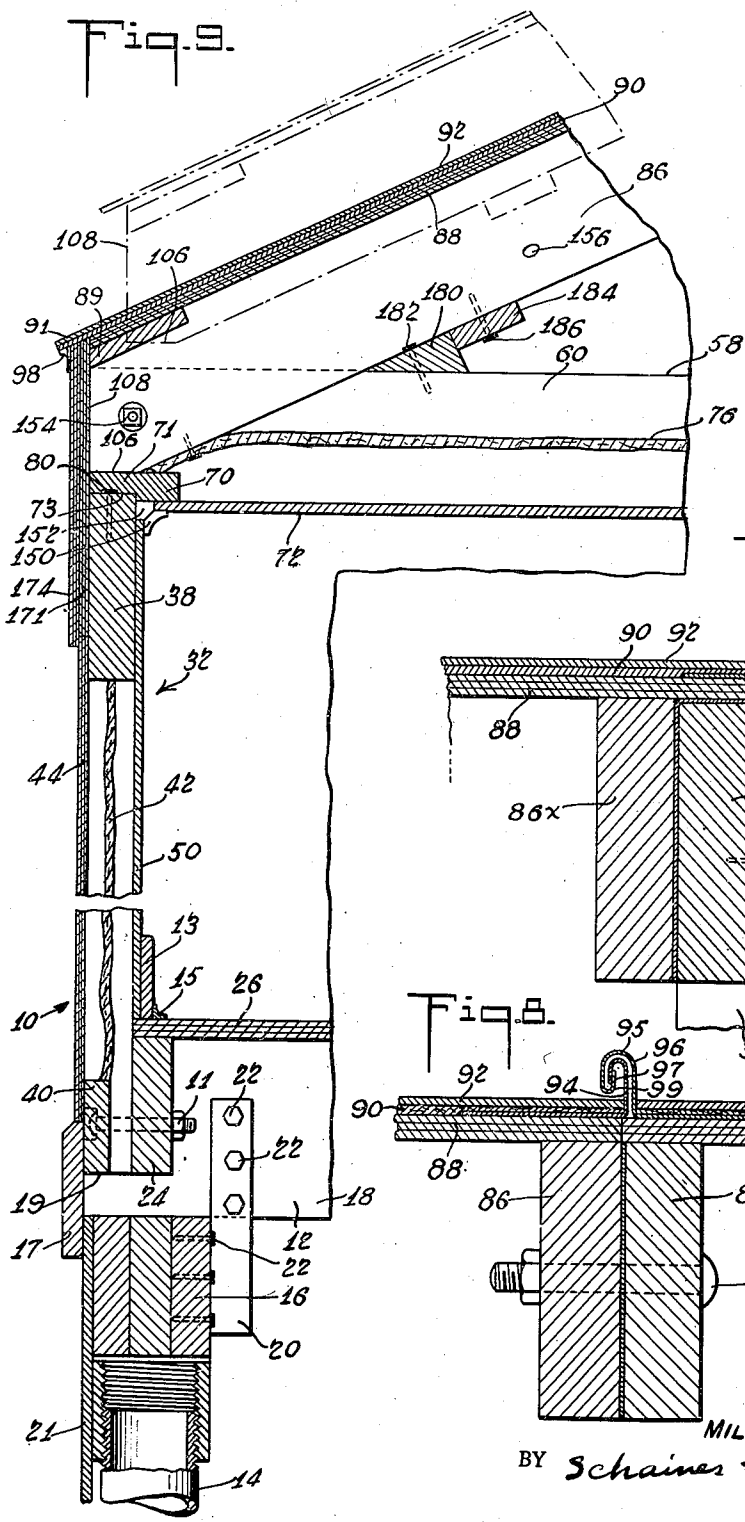


Fig. 10.

Fig. 8.

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BUILDING CONSTRUCTION

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Fig. 11.

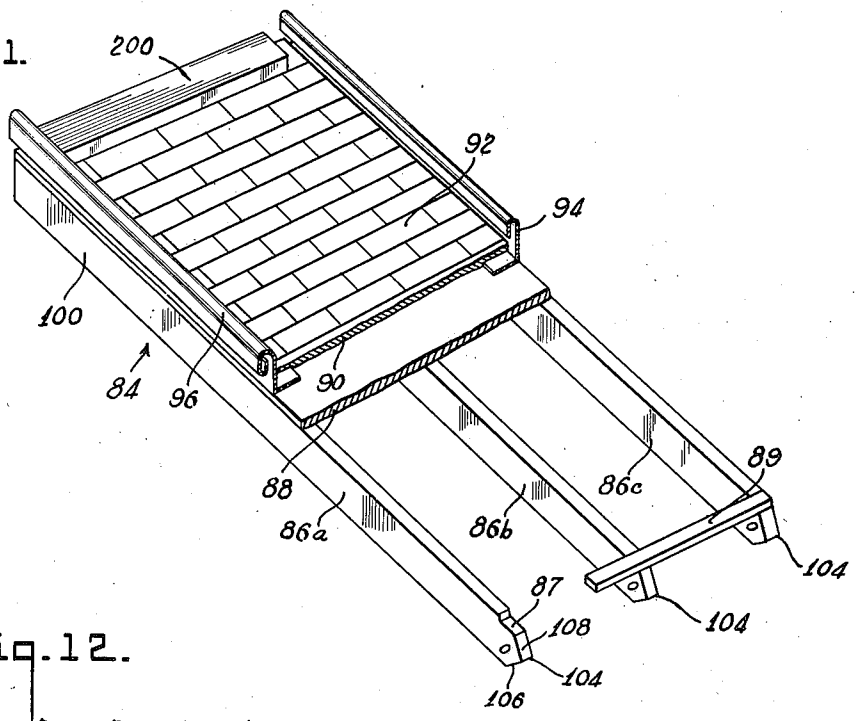


Fig. 12.

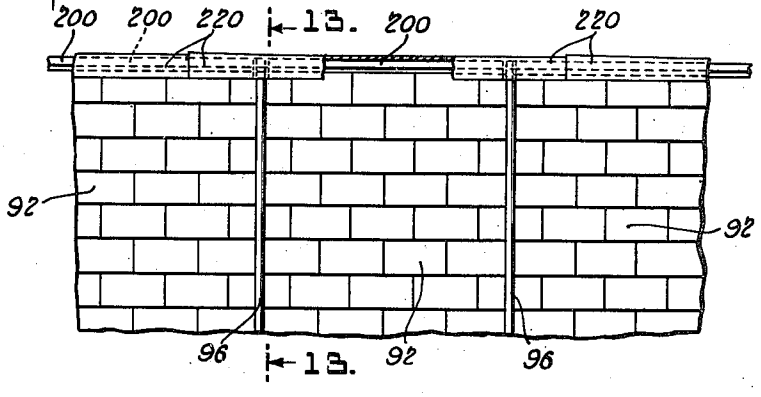
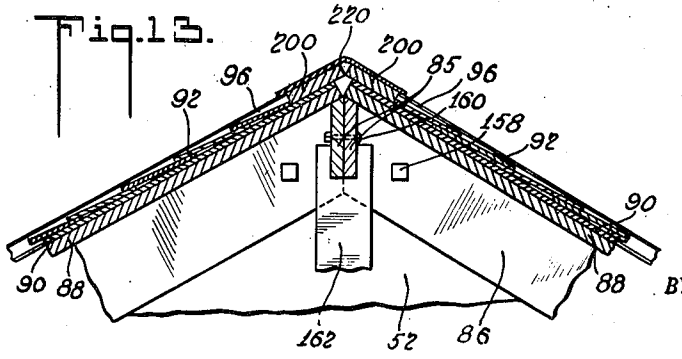


Fig. 13.



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Patented Mar. 19, 1946

2,396,829

UNITED STATES PATENT OFFICE

2,396,829

BUILDING CONSTRUCTION

Miles Harold Carpenter, Raleigh, Tenn.

Application January 23, 1945, Serial No. 574,063

10 Claims. (Cl. 108—1)

My invention relates to building constructions generally, and in particular to buildings of prefabricated elements. Within the past few years, need has arisen for buildings adapted to be erected quickly, easily and completely. The necessity for concentrations of workers at and near manufacturing centers has created housing problems which cannot be solved by conventional building methods, nor can conventional building methods cope with the need for shifting buildings from one site to another to accommodate population movements.

The main object of my invention, therefore, is the provision of a building of prefabricated elements, which building can be erected easily, quickly, and completely, which can just as easily, quickly and completely be taken down without damage or destruction to the elements and connecting members, shifted to another site, and at this new site re-erected just as easily, quickly and completely, using the same elements and connecting members, as in the original erection.

Among other objects of my invention, aiding in the accomplishment of the main object above set forth, are the provision of wall, ceiling and roof panels or modules of such relative dimensioning as to be readily interfitted and connected in the erection of a building; the provision of a complete roof by the use of interfitted and interlocked panels; and the removable securement of the roof panels to each other and to the ceiling panels, both supported by the wall panels.

The present invention is a continuation-in-part of my co-pending application Serial No. 463,707, filed October 28, 1942, and relates mainly to the roof panel components of my buildings.

In the drawings annexed hereto, forming a part of this specification:

Figure 1 is a perspective view of one form of building constructed according to and embodying my invention, a roof panel being shown in position for placing on the roof;

Fig. 2 is a perspective view of a roof panel constructed according to and embodying my invention, with parts broken away to show details of construction;

Fig. 3 is a perspective view showing the connections between the roof, ceiling rafters and wall panels, with parts broken away;

Fig. 4 is a front elevational view showing a portion of the front wall, the ceiling rafters and roof assembly, with parts broken away;

Fig. 5 is a vertical transverse section showing the roof and ceiling construction;

Fig. 6 is a vertical transverse section showing the roof crown construction in detail;

Fig. 7 is a vertical transverse section of an internal wall and ceiling detail;

Fig. 8 is a vertical longitudinal section on the line 8—8 of Fig. 1;

Fig. 9 is a vertical transverse section on the line 9—9 of Fig. 1;

Fig. 10 is a vertical longitudinal section on the line 10—10 of Fig. 1;

Fig. 11 is a perspective view of a form of roof panel constructed according to and embodying my invention, with parts broken away to show details of construction;

Fig. 12 is a side elevation of a completed roof, also with parts broken away to show internals; and

Fig. 13 is a section on the line 13—13 of Fig. 12.

My invention is based on the panel or module system; that is, the walls, ceilings and roof, as major elements of my building, are formed of one or more panel or module units, of such size and relative dimensioning as to be readily interfitted and interlocked, and just as readily disengaged. While proportions may be important, any dimensions and size I may give are illustrative and may be varied within wide limits without departing from the spirit of my invention. I will illustrate and describe my invention herein as applied to a rectangular building, having a plurality of rooms and a gable-pitched roof, but this is only for illustration and not for limitation, other building shapes as well coming within the scope of my teachings.

My wall, ceiling and roof panels are preferably rectangular in shape (except the end wall panels), this form lending itself best to economical and simple fabrication on an assembly-line plan by the use of jigs, dies and patterns. The rectangular shape also lends itself best to crating, shipping and easy handling in transportation and erection. The panels are made of sufficient strength as to be self-sustaining and weight supporting, and able to withstand the stresses and strains of erection, dismantling, transportation and re-erection, as well as the weight of any lighting fixtures, plumbing fixtures and wall decorations which may be incorporated therewith.

Reference numeral 10 indicates my building generally, mounted on a foundation structure 12 which may rest upon a plurality of piers or columns 14. Foundation structure 12 comprises a rectangular sill or framework 16 of secured-together beams disposed atop piers 14. The floor

joists 18 are disposed upon and secured to sill 16 as by angle irons 20 and heavy wood screws or bolts 22 passing therethrough into sill 16 and floor joists 18. Additional floor joists as 24, at right angles to the main joists 18, may be employed and secured flush with the top of floor joists 18 to provide a support, with beams 18, for a suitable flooring 26. The ends of joists 18 may be notched, as at 19, to receive the wall panels therewithin, the notch extending entirely about the structure. My sub-floor structure, comprising joists 18 and cross-members 24, may be formed in panel units, of rectangular shape, and a plurality of panels, with the end joists abutting may be employed over the sill structure to form the sub-floor structure.

Each wall panel of my invention comprises a rectangular frame and facing material to cover both sides thereof. The front and rear walls 30 as complete entities may be formed as desired of single panel units, although if desired the walls may be formed by locking together a plurality of panels in edge-to-edge abutting relationship.

Each wall panel or module 32 comprises a rectangular framework of 2" x 6" vertically disposed stud beams 34, set flatwise, a 2" x 8" beam 38 horizontally disposed and extending flatwise across the top of the studding members 34, and a horizontally extending, flatwise disposed beam 40 of less than 2" in thickness, at the bottom flush with the front of the frame and spaced from the rear thereof. The interior of the panel may be filled with suitable insulating material, or I may employ blanket insulation as 42 secured within the panel framing. Heavy facing material 44 is applied and secured over one side of the frame, from side to side, but short of the upper and lower marginal edges of the frame, and may consist as desired, of plywood, fiber boarding, shingling or the like, to form the outer face of the panel. The studding in each panel may be suitably spaced to provide necessary window 46 and door 48 openings therein, and the outer facing material 44 is similarly apertured for such openings in the panels. Additional studdings as 36 may be incorporated inside the frame work for reinforcement or for outlining window, door or other openings.

Facing material 50 of plywood, plaster board, fiber boards, etc., similarly apertured to provide window and door openings, is employed to cover the other and inner face of the panel, and to cover same from side-to-side but not at the top or bottom, facing 50 being spaced from the top and bottom of the frame as shown in Fig. 9 for purposes to be explained below. The facing material is secured to the wide flat sides of the studding 34, 36 and cross beams 38 and 40 as by a suitable adhesive, and the bond may be reinforced by the use of nails or wood screws. The use of the studs and cross beams in flatwise disposition permits the use of uniformly thick members with certain thereof having different widths, and also provides greater glue bond than would be secured if the beams were set edgewise. The inner facing material may be wallpapered or painted, and may have lighting fixtures or other fixtures installed thereon with suitable lead wires extending out from the top or bottom of the panel.

Panels 52 forming the end walls of the building, are of construction generally similar to panels 32, except that they may be shaped differently. Building 10 is shown with a gable-pitched roof 54, and the upper edges of panels 52 are angled as shown. A number of panels 52, 52 may be provided and locked together by suitable wall lock mechanisms as indicated at 56, to form the end wall, and similarly suitable means may be employed not only to secure a number of panels together to form a wall, but also to secure side and end walls to each other at the corners of the building, and to secure internal walls to each other and to the outer walls. I prefer to use 2" x 6" studding for the sides of the wall panels not only for their strength and bonding surface, but also because the 6" depth is quite suitable for the insertion thereinto of wall locking mechanisms. The wall panels, complete with doors and windows in place, and complete with interior surface decoration, are entirely factory fabricated, and thereafter boxed or crated for shipment to the building site.

In erecting the outer walls of my building, the panels are raised into vertical position and set down and keyed into notch 19, which extends entirely about the sub-floor structure. Suitable openings are factory formed through floor joists 18 and through cross or trimming joists 24 in registry with openings through the cross beams 40 at the lower edge of the panel, and carriage bolts 11 are passed through these registering openings to removably secure the wall to the foundation structure. The outer walls, front, side and rear, are removably secured to each other at the corners by suitable locking devices. The depth of notches 19 is such, and the inner facing 50 is so applied to the panel, that as the panel rests upon the floor joists, facing 50 is slightly spaced upwardly from the top of the beams 18, leaving space for the insertion of a floor covering as 26. A base board 13 and molding as 15 may be removably field-applied to complete the wall and floor joint inside the building. At the outside of the building, a drip board 17 may be field-applied and removably secured as by wood screws or other bolts, lapping over the bottom of panel 30 and a field-applied sill covering sheet or board 21 entirely around the building.

In like manner, internal walls 31 may be set up and removably secured in place and to the front, rear or side walls as desired.

One form of foundation structure I may employ is composed of adjustable columns or piers, although I may employ fixed height concrete blocks for such purpose; a wall locking mechanism well adapted for use in removably securing my walls and wall panels to each other is shown and described in my co-pending application Serial No. 421,660; and a flooring structure applicable to my building teachings is shown and described in my co-pending application Serial No. 427,451, although a flooring surface may be factory laid upon joists 18, 24. These prior applications represent portions of a complete building program, and the present application represents a further step in the construction and assembly of a building as a complete entity.

My ceiling panels 58, 58 comprise a plurality of 2" x 6" joists 60 evenly spaced apart, set edgewise in parallel relationship having a rigid facing material as plywood, plaster board or the like, secured on one side thereof. At the front of each panel, the joists are notched at the underside thereof, as at 70, and a tie strip 71 extending the full width of the panel is disposed within the notches and secured to all the joists as by nails, cement, or otherwise. The spacing between joists 60a, 60b, 60c, etc., is maintained by the facing material 72, the tie strip 71, and cross beams 61, 61 extending across the panel in the center there-

of. The ceiling panel frame is completed by a cross-beam 74 at the rear end of the panel. Suitable blanket insulation as 76 may be secured inside the ceiling panels 58 as desired (see Figs. 5 and 9).

I have found it convenient to make the ceiling panels 58 of such length as to extend across wall to wall of each room in my buildings. Referring to Figs. 5 and 9, after the outer wall 30 is erected and inner wall 31 is locked into the end wall formed by panels 52, the ceiling panels 58 are disposed atop thereof, the front end of the panel resting atop the cross beams 38 of the wall panel, with the beams 38 being received within a locating notch 73 in the tie strip 71, and the rear and resting atop wall 31.

Nails or wood screws 80 may be employed, through the strip 71 and extending into frame beam 38, to secure the ceiling panel atop front wall 30, and similar fastening means 82 may be employed to secure the rear end of the ceiling panels to the inner walls as 31. As so secured (see Fig. 3), the strip 71 serves as a wall plate or capping. After the first ceiling panel A is secured in position, the second panel B, formed with joists 62*a*, 62*b*, to 62*d*, is laid over atop walls 30 and 31, and similarly secured thereon just as panel B. Care must be taken, however, to butt the first joist 62*a* of panel B flatly against the end joist 60*d* of the first panel A, in order to have a continuous ceiling surface, and in order to provide proper roof rafter securement. In like manner, the remaining ceiling panels C, D, etc., may be added to complete the coverage, care being taken that the end joist *d* of each panel butts closely against the first joist *a* of the next panel. A plurality of horizontal openings are formed through the end joists of each ceiling panel, and carriage bolts are passed therethrough to removably secure the panels together.

The rooms are carefully dimensioned; that is, the sill structure 16 is prepared of such length and width, and the walls of such length, that a whole number of ceiling panels will cover same, from end to end.

I provide roof panels 84, 84 in equal number to the number of ceiling panels 60, 62. Each roof panel 84 is rectangular in shape and comprises a plurality of 2" x 6" rafters 86, set edgewise (as are the joists of the ceiling panels). Rafters 86*a*, 86*b* and 86*c* are evenly spaced apart in parallel relationship, and covered on one side preferably by a layer of plywood 88, although fiberboarding or other suitable material may be employed. Atop the plywood, I apply a layer 90 preferably of asphalt felt, although other similar material may be used, and over the felt, I place a layer of thick butt strip shingles 92 lapped upwardly from bottom to top and across the width of the panel. Along the lateral edges of each roof panel 84, I insert flashing strips 94, 96, or copper or other suitable material, imbedded between the plywood 88 and felt 90 layers in the panel covering, and extending the full length of the panel (see Fig. 11). Except for the panels to be placed at the ends of the roof, the flashing strip 94 on one side of each panel, is bent upwardly at right angles to the panel, and then back inwardly and over to form a hook or bend 95 opening downwardly towards the panel, as shown in Fig. 8. Flashing strip 96 at the other side of the panel also projects upwardly at right angles to the panel. The extension of flashing 96 is such as to reach above bend 95 in flashing 94, and flashing 96 is then curved outwardly and over and around bend 95, with the terminal end 97 thereof bent back and inwardly to form an upwardly opening hook 99.

The top edges of all the rafters at the front thereof are notched as at 87 to receive therewithin a tie strip 89, which may be permanently secured to each rafter as by heavy wood screws, spikes, etc., and the rafters 86, at the rear thereof are cut at an angle and a tie beam 85 secured across the ends thereof, angled rearwardly as shown in Figs. 5 and 6, which serves, with the plywood layer, to maintain the proper predetermined spacing between the rafters 86*a* and 86*c*. The covering material, comprising plywood 88, felt 90 and shingles 92, may be formed of such length as to extend over beyond the strip 89, as at 91, and a flashing 98 may be embedded in the front edge thereof extending forwardly thereof (see Fig. 9).

In order to form the gable-pitched roof shown here for illustration, the ends of the rafter beams 86 must be treated in accordance with the angularity of pitch desired. The inner ends 100 of rafters 86 are miter cut at the desired angle, as at 102 (see Figs. 2 and 11) and the end tie beam 85, extending across the ends of the rafters, is inwardly angled, as above referred to. The front end edge of each rafter, at the bottom thereof, is cut upwardly at an angle as at 106, at right angles to rear end 102, and the upper edge portion is cut downwardly at an angle as at 108, the upper edge cut being at right angles to cut 106 and parallel to the rear end 102, cuts 106 and 108 forming a point 104 at the front tip of each rafter.

The end rafters of each roof panel are transversely apertured at a number of points, and the end tie beams 85 are also provided with a plurality of apertures therethrough for reasons to be developed below, and the panel covering may be apertured to permit the extension therethrough of ventilating ducts (not shown), or the erection thereon of gable dormers, or the like, all at the factory.

The end roof panels, that is, the panels for the ends of the roof, are prepared in the form shown in Fig. 10. The inner sides 110 thereof are formed as above described in respect of ordinary roof panels, but the outer sides are specially formed. The panel covering material comprising layers 88, 90 and 92 is extended laterally and outwardly beyond the rafter 86^x as at 112, and a facing molding strip as 114, is permanently edgewise secured to the underside of the panel covering extension 112, projecting downwardly therefrom and spaced from rafter 86^x a distance substantially equal to the thickness of end wall 52 to define a downwardly opening, side-wall receiving channel. A strip of flashing material 116 is embedded between the panel covering layers overlying strip 114 and extending around and under the lower end thereof (see Fig. 10). The side walls 52 may be capped by a flashing sheath as 118, and when the end panel is set down over end wall 52, the wall is received within the channel formed by rafter 86^x and strip 114. Securement in the field is achieved by the use of nails or spikes 140 through strip 114, facing 44 and into cross member 38.

After the walls are erected and covered over by the ceiling panels, the addition of base board 13, floor molding 15 and ceiling molding 150, completes the interior. These may be removably secured by the use of nails or wood screws, and serve not only to decorate the room, but also to cover any gaps, as 152, which may be created deliberately to compensate for swellings and shrink-

ages, or which may be left due to some slight local irregularity.

The ceiling panels are removably secured atop the front and rear walls by means of spikes or wood screws 80, and the roof panels are secured to the ceiling panels by means of elongated carriage bolts 154 which pass through registering apertures in the butted together ceiling joists and the abutting roof rafters which also butt against the butted joists. As above mentioned, additional openings 156 are formed in the endmost rafters of each panel, and additional bolts as 158 may be used to further secure the roof panels in side-by-side relationship.

In the field erection of my building, the ceiling panels are first secured atop the walls by means of nails, spikes or wood screws 80. The roof panels are then rested at their front ends on the walls and are temporarily supported until the opposing panel on the other side of the roof is aligned therewith and the angled rear tie strips 85, 85 are brought together, and carriage bolts 160 are passed through registering apertures to removably lock same together. A number of king posts 162 may be prepared and rested atop the ceiling joists preferably in line with inner walls as 31 to receive the secured-together ties 85, 85 within a suitable notch therewithin. Collar beams 164 may also be provided and secured to aligned ceiling rafters by means of field applied bolts 166. Additional ties as 168 may be used to hold the ceiling joists in alignment, bolts 170 being used for the removable securement of ties 168 to the ceiling joists. A metal ridge cap 172 of predetermined length, may be removably secured over the ridge crown to top off the roof. As the roof panels are butted together and flashing-interlocked (see Fig. 8), the upstanding flashings may be crimped together, if desired, to more positively seal the joints against the entrance of rain, snow, or the like.

As shown in Figs. 1 and 4, the ends of the interlocked flashings immediately adjacent the crown of the roof may either be cut away (at the factory or at the field during erection of the building) or they may be bent over immediately adjacent the crown of the roof to lie flatly against the panels, so as to provide flat, level support on each side of the crown of the roof for the securement thereover of the ridge cap 172.

As shown in Figs. 11, 12 and 13, I preferably provide each of my roof panels 84, 84 with support for the crown shingling or capping. At the upper end of each panel 84, 84, I secure a rail 200 disposed between the flashing strips 94, 96 of thickness equal to the height of the flashing strips 94, 96. The rails 200, 200 are preferably a bit shorter in length than the distance between the flashing strips in order to provide working space for the interfitting and interlocking of the flashing hooks (see Fig. 8) and as will be seen in Fig. 13, the end of each rail 200 extends slightly over the upper end of the panel. When opposing pairs of roof panels are raised into position, the bottom edges of the rails 200, 200 of oppositely disposed panels bear against each other at the crown of the roof, so as to leave a relatively narrow V-space opening at the very top of the roof. When all the roof panels have been secured in position, a line of shingling 220, endwise lapped, is laid over the crown of the roof resting flatly upon the tops of the rails 200 and overlying both the interfitted flashing strips and the rails. Shingles 220 are of such width as to extend beyond the margins of the beams 200, and are preferably of flexible material so that they may be centrally buckled at the crown of the roof and bent down at the ends, permitting ready drainage of rain water, etc., onto the shingles of the pitched roof panels.

This matter of providing proper support for the crown capping or shingling is important in the erection of my building to prevent leakage. The transversely extending rails flush with the flashing strips, provide a support on each side of the crown, for the line of endwise lapped shingles 220, 220, and the extension of the rails 200 beyond the upper end of the panels reduces the V-space at the very crown of the roof leaving relatively little of the shingling unsupported.

Carriage bolts, as 154, may be field-applied through registering apertures to locate the ceiling rafters with respect to the ceiling joists, and to removably secure the roof panels to the ceiling panels. A wedge-shaped kick-stop bar 180, of sufficient length preferably to extend across two or more ceiling panels, may be field-laid across the top of the ceiling joists and driven up against the roof rafters 86, at the point where the rafters and joists interfit, and then fixed to the joists at the point of crossing with the rafters, as by nails, wood screws, or spikes 182, driven through stop 180 into the joists 60, 62 and 64. Additional kick-stop bars may be provided to extend the full width of the building, or a single elongated bar may be used instead of a number of shorter bars. A tie-beam 184, extending across several roof panels, may then be set up against the underside of the rafters, bearing against kick stop 180, and spiked, wood-screwed, or nailed to the rafters, as at 186. This kick stop 180 and tie beam 184 arrangement serves not only to help support the roof and keep it from sagging and sliding, but also to keep the joists and rafters in lateral alignment. The kick-stop 180 and tie beam 184 arrangement is very important. They receive and transmit the entire thrust load of the roof, and also relieve the holding bolts 184 from the shearing effect imposed by the roof weight load. The bolts 154 may be inserted through the abutting rafters and joists after the kick-stops and tie-beams are secured in position to align the rafters and joists for securement, or before. The preferable method is to insert the bolts after the kick-stop and tie-beam arrangement is secured. After the bolts 154 are inserted and tightened, additional bolts may be passed through registering apertures in abutting rafters and joists, as desired, to make the securement more positive.

A filler board 171 may then be fitted over against the outer edges of the ceiling rafters, flush with wall covering 50, and a facing board 174 lapping over the joint between filler 171 and facing 50 may then be field-applied to complete the outside of the building, and the roof edge flashing 98 nailed to facer 174 to finish the sealing of the building against the elements.

All the carriage bolts used to secure the walls to the foundation, the ceiling panels to each other, and the roof panels to each other and to the ceiling panels, may be removed easily. The roof flashing interfit may be uncrimped and the panels separated without damage. The spikes, wood screws or nails used to secure the ceiling panels to the walls, and to secure the moldings and facings, may all be withdrawn without material damage either thereto or to the panels, moldings or facings.

My building may thus be taken down without damage, moved piecemeal to another site, and at this other site reerected as easily and as quickly

as in the first instance. The same wall, ceiling and roof panels may be used thusly time and time again; the same carriage bolts may be used, as may be the moldings, facings and trim. The interfit and interlock of the ceiling and roof panels, and of the roof panels to each other, may be readily reduced in order to restore the building as a whole to its panel components.

All the major elements of my building are pre- or factory-fabricated. Once the piers or columns 14 and sill 16 are in place at the designated site, the floors, walls, ceilings and roof may be erected thereupon as units. The floor panels may have the floor surfacing material factory laid upon the joists; the walls may have the window and door openings factory formed therein, and the wall painting or papering factory completed, and the lighting and plumbing fixtures and electrical outlets may also be factory incorporated, and the roof panels may have their covering materials and decorations factory completed. All the major components of the building of my invention thus lend themselves readily to "assembly-line" production, for once the size of the ultimate building is determined, the dimensioning of the floor, wall, ceiling and panel units is relatively simple. The walls interfit with the roof, the roof and ceilings interfit, and the final construction is sturdy and as long lived as a conventional building of the same materials.

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

1. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel comprising a plurality of parallel and spaced apart rafters, a multiple-layered-facing over one side of the roof panel, a flashing member embedded in said facing along the longitudinal marginal edges of the panel, projecting upwardly of the panel, the flashing of each panel interfitting with the flashing of the adjacent panel.

2. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel comprising a plurality of parallel and spaced apart rafters, a multiple-layered-facing over one side of the roof panel, a flashing member embedded in said facing along each longitudinal marginal edge of the panel, projecting upwardly of the panel, the flashing along one edge projecting upwardly, over and inwardly of the panel, and the flashing along the other edge projecting upwardly, over and outwardly of the panel.

3. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel comprising a plurality of parallel and spaced apart rafters, a multiple-layered facing over one side of the roof panel, a flashing member embedded in said facing along each longitudinal marginal edge of the panel, projecting upwardly, over and inwardly of the panel, and the flashing along the other edge projecting upwardly, over and outwardly of the panel, the outwardly extending flashing of one panel fitting over and around the inwardly projecting flashing of an adjacent panel, thereby flashing-interfitting the adjacent panels.

4. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel comprising a plurality of parallel spaced apart rafters, a multiple-layered facing over one side of the roof panel, a flashing member embedded in said facing along the longitudinal marginal edges of the panel, projecting upwardly of the panel, the flashing along one edge terminating in a downwardly opening hook, and the flashing on the other edge terminating in an upwardly opening hook, the flashing of one panel interfitting with the flashing of the adjacent panel.

5. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel comprising a plurality of parallel spaced apart rafters, a multiple-layered facing over one side of the roof panel, a flashing member embedded in said facing along each longitudinal marginal edge of the panel, projecting upwardly of the panel, the flashing along one edge projecting upwardly, over and inwardly of the panel, and terminating in a downwardly opening hook, and the flashing along the other edge projecting upwardly, over and outwardly of the panel, and terminating in an upwardly opening hook, the latter flashing along the edge of one panel enveloping and interfitting with the former flashing along the edge of an adjacent panel.

6. In a building construction, a roof comprising a plurality of roof panels disposed and secured in side-by-side relationship, each panel, including the panels at the ends of the roof, comprising a plurality of parallel and spaced apart rafters, a multiple-layered facing over one side of each panel, a flashing member embedded in said facing along both longitudinal marginal edges of the panel, projecting upwardly of the panel, the flashing of each panel interfitting with the flashing of the adjacent panel, the end panels having flashing along both longitudinal edges, extending upwardly along the inner edge and downwardly along the outer edge.

7. In a building construction, a roof comprising a plurality of panels, each roof panel comprising a plurality of parallel and spaced apart rafters, and a facing over one side of the panel, each roof panel having flashing along the longitudinal marginal edges thereof, the panels being flashing-interlocked with one another, the facing of the endmost panel extending laterally and outwardly therefrom and having a wall receiving groove on the underside thereof, and having flashing extending over and around the extension and up into the groove.

8. In a building construction, a roof component comprising a plurality of panel members disposed and removably secured in side-by-side relationship, each panel having upwardly projecting flashing strips along each longitudinal marginal edge thereof, and each panel, at the upper end thereof, having crown capping support means flush with the flashing strips, and at an angle thereto, the panels being flashing interlocked with one another.

9. In a building construction as in claim 8, in which the capping support means comprise a rail secured across each panel at the upper end thereof between the flashing strips.

10. In a building construction as in claim 8 in which the capping support means comprise a rail secured across each panel at the upper end thereof between the flashing strips, and the rail extends laterally beyond the end of the roof panel.

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