A set of vertical poles suspending therebetween, in abutting relationship, wall panels fastened thereto by threaded fasteners and floor panels fastened directly to the bottom edges of the wall panels by means of threaded fasteners.
LOW COST INTEGRATED DWELLING STRUCTURE AND METHOD OF MAKING SAME

FIELD OF THE INVENTION

[0001] The present invention relates generally to building construction and more particularly to inexpensive high integrity dwellings.

BACKGROUND OF THE INVENTION

Description of the Prior Art

[0002] The availability of low cost housing is a worldwide problem. Real estate is expensive and even if the property is available skilled labor to construct, a dwelling often drives the price beyond the reach of a high percentage of world population. On site, wood and steel frame construction is expensive. Modular and pre-fabricated homes have long been known as a means for reducing the cost of construction. The problem remains that fabrication is still relatively expensive and the end construction sacrifices the structural integrity necessary to withstand many natural disasters such as hurricanes, tornados and earthquakes.

[0003] Because of the efficiency of pole construction, pole bars have become almost commonplace. Pole construction may provide for support of the poles on pads and portions of the poles may provide for bracing with floor joists and roof joists secured to the poles to complete the structure. Pole construction has been combined with concrete construction.

[0004] Examples of prefabricated and reinforced concrete in building construction with hollow cement columns projecting through brackets attached to main beams is disclosed in U.S. Pat. No. 2,618,146 to Ciarlini. Frame construction has been proposed to provide a means for quickly and securely joining construction members in rigid relationship employing mechanical fasteners allowing for convenient assembly and disassembly. A device of this type is shown in U.S. Pat. No. 2,260,105 to Hasenburger et al.

[0005] Construction has also been proposed which includes a conventional I-beam secured to a concrete footer with a leveling plate providing a support surface for elongated wall panels. A device of this type is shown in U.S. Pat. No. 3,216,163 to Carew.

[0006] It has also been proposed to construct small cabins and roadside inns with a plurality of prefabricated wall units secured to a floor set upon a foundation. The floor portion in this construction is not integrated to the walls but, rather, provides a structure where both the walls and floor panels are supported on the ground. A device of this type is shown in U.S. Pat. No. 2,308,248 to Rehn.

[0007] Other construction has been proposed which includes vertical wooden members secured to a sole plate which is thereafter attached to a concrete footing. The vertical wooden members provide support for both the floor and exterior surface of the structure. Construction of this type is shown in U.S. Pat. No. 991,751 to Salfeld. Other efforts have led to the proposal of vertical poles sandwiched between interior and exterior walls with floor joists projecting exteriorly of the wall portion. A structure of this type is shown in U.S. Pat. No. 4,563,842 to Lewis.

SUMMARY OF THE INVENTION

[0008] The low cost integral pole construction of the present invention includes spaced apart poles between which are sandwiched prefabricated panels of sheeting and peripheral framework to be integrated into a pole and panel construction to carry heavy shear loads. An elevated floor panel may be suspended from the bottom extremities of the wall panels.

[0009] Other features and advantages of the invention will become apparent from the following detailed description, taken in conjunction with the accompanying drawings which illustrate, by way of example, the features of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a low cost integrated dwelling constructed in accordance with the present invention;

[0011] FIG. 2 is a partial vertical sectional view in large scale, taken along the lines 2-2 of FIG. 1;

[0012] FIG. 3 is a vertical sectional view taken along the line of 3-3 of FIG. 2;

[0013] FIG. 4 is a partial horizontal sectional view in enlarged scale taken along the lines 4-4 of FIG. 1;

[0014] FIG. 5 is a partial horizontal sectional view, in enlarged scale, taken along the lines 5-5 of FIG. 1;

[0015] FIG. 6 is a partial vertical sectional view, in enlarged scale, taken along the lines 6-6 of FIG. 1;

[0016] FIG. 7 is a partial horizontal sectional view, taken along the lines 7-7 of FIG. 1;

[0017] FIG. 8 is a partial vertical sectional view, in enlarged scale, taken along the lines 8-8 of FIG. 1;

[0018] FIG. 9 is a partial vertical sectional view, taken along the line 9-9 of FIG. 1;

[0019] FIG. 10 is a vertical sectional view, taken along the line 10-10 of FIG. 9;

[0020] FIG. 11 is a partial horizontal sectional view, taken along the lines 11-11 of FIG. 1;

[0021] FIG. 12 is a partial vertical sectional view, in enlarged scale, taken along the lines 12-12 of FIG. 1;

[0022] FIG. 13 is a back view, in enlarged scale, of a wall panel incorporated in the dwelling shown in FIG. 1;

[0023] FIG. 14 is a vertical sectional view, in enlarged scale, taken along the lines 14-14 of FIG. 13;

[0024] FIG. 15 is a back view, in enlarged scale, of a framed wall panel defining a front door wall;

[0025] FIG. 16 is a back view, in enlarged scale, of an upper wall panel included in the dwelling shown in FIG. 1;

[0026] FIG. 17 is a back view, in enlarged scale, of a wall panel included in the dwelling shown in FIG. 1;

[0027] FIG. 18 is a side view of the panel shown in FIG. 17;

[0028] FIG. 19 is a bottom plan view, in enlarged scale, of the underside of a floor panel included in the dwelling shown in FIG. 1;

[0029] FIG. 20 is a back view of an interior wall panel with a central door opening as incorporated in the dwelling of FIG. 1;
The panels, such as the exemplary wall panels shown in FIGS. 13 and 15, include a framework of 2x4's or the like covered over by plywood sheeting or the like and configured with, for example, door frame 139 or window frame openings 141. The framework is typically made up of horizontal header cross members at the top and bottom and vertical side and intermediate members and are typically nailed together by nails 143 as shown in FIG. 14 and/or gluing. Floor panels, generally designated 147 (FIG. 19) are constructed in conventional jigs to provide the rectangular panels as shown in FIG. 19 with an interior network, for instance, 2x4's or 2x3's frames. Jigs are also provided to construct interior wall panels 149, 151 and 153 as shown in FIGS. 19, 21 and 22, respectively. The interior wall panels 20 and 21 have respective central door opening and in offset door openings 157 and 159. It will be appreciated that this construction provides for high strength shear panel assemblies, whether the sheeting is in the form of plywood, pressboard corrugated plastic or metal or other sheeting well known in the art.

Referring to FIG. 23, an interior wall panel, generally designated 161, may likewise be constructed of sheeting and framework to the desired configuration for the loft.

Referring to FIG. 16, triangular gable panels, generally designated 165 are constructed of sheeting and a peripheral network of framing, one being the mirror image of the other and including a central window opening 167, all to cooperate in closing the opposite ends of the loft.

Referring to FIGS. 17 and 18, rectangular roof panels, generally designated 171, are also constructed of sheeting and framework to cooperate in forming the roof.

As will be appreciated by those skilled in the art, the panels may be insulated and constructed with various utility sub components, such as electrical lines and plumbing lines and fixtures so as to allow for the trade's work to take place in a more or less production line setting prior to transport to the construction sight. Once the various panels are preassembled, access holes may be drilled in the sheeting for access to bolt heads and fastener nuts and the panels then primed and painted. They may then be conveniently stored for subsequent transport to a construction site which may be in, for instance, a remote local where trade persons are not readily available.

Referring to FIGS. 1, 12 and 26, a construction site may be prepared by possibly some minimal grading to allow for drainage and to mitigate possible re-growth of vegetation. The piers 101 are then set as by pouring new concrete or burying the piers in the ground to define an exterior perimeter defining a footprint per the dwelling plans and placement of one or more centrally disposed support piers within the perimeter. Typically, the piers will incorporate fittings on the top sides thereof which may be in the form of upwardly opening U-shaped brackets, generally designated 181.

When the assembly is to take place, whether for preplanned housing or to address a disaster, the finished panels for a number of dwellings may be loaded on a flat bed truck or the like with the poles and transported to the jobsite such as for reconstruction after a natural disaster to efficiently erect low cost housing. Preferably, the panels will be covered by the usual water repellent covering and will be stacked in an order reverse from that in which they are to be assembled.
For the purposes of illustration the construction of one dwelling will be described, it being appreciated that multiple dwellings may be constructed concurrently or in a sequence as dictated by the weather conditions and need for shelter. The vertical poles 103, 105, 109, 111 and 113 and any interior poles pre-finished, preferably with rectangular cross sections and planar sides to abut the edges of the respective panels, will be cut to length depending on whether there is any slope to the terrain and on the pitch of the roof. The initial assembly of one of the first, or principal, panels to be erected, such as panel 121, may then take place as by resting, for instance, the panel with the interior surface face down on a relatively smooth surface, such as a flat ground surface, possibly covered on a cloth or pad. If not previously done, a strip of compressible foam insulating tape 114 (FIG. 28) may be adhered along the opposite vertical edges of the panel spaced approximately 1/2 inch from the exterior surface so that, when compressed, it will not be ejected beyond the face of the panel itself. It is preferred that the interior surfaces of the panels and poles be aligned, leaving the exterior side of such poles projecting outwardly beyond the plane of the respective wall panels.

It will be appreciated that the poles may be prepared prior to transportation to the construction site with patterns of bores 185 drilled therein in vertical spaced relation, preferably utilizing the same jigs for bolt hole location as was used for locating panel bolt holes in the mating panels. For the corner poles, two sets of bores will be drilled in alternating, staggered spacing to receive bolts from respective orthogonal panels. In the preferred embodiment the sidewall panels and poles are constructed to elevate the bottom edges of the respective such panels some distance above the underlying terrain so that the floor will be elevated to avoid ground contact and, in areas prone to floods, allow for water flow thereunder without presenting obstacles that could otherwise create a dam resisting or diverting water flow. In any event, what will be the interior surfaces of the poles and panels are aligned flush with one another and the bolts inserted through the framework of the panels and the poles, being appreciated that access holes will typically be formed in the sheets of the panels or for access to the head and nut of the bolts on one or both sides of the pole. Once the principal panel 121 is assembled to the poles 103 and 105, the assembly may be positioned as shown in FIG. 26 with the respective feet of the poles received in the respective brackets 101 and blocked in position as the panel 121 is raised to its erect position shown in FIG. 29 to form a closure for the first end of the dwelling and be braced in place by conventional bracing or ropes while the workman complete assembly of the second panel 127 and the support pole 107 along one vertical edge thereof, it being appreciated that the insulation foam tape 114 will be positioned in place and the predrilled hole and clearance openings utilized. The foot of the pole 107 may then be positioned in the corresponding bracket and the panel 123 and pole 107 raised into position and the free edge of panel, covered with an insulating tape, abutted against the corner pole 105 and bolts inserted in the bores 191 to bolt the peripheral frame of such panel to the corner poles, such bolts merely tightened hand tight to leave some flexibility for squaring up the overall construction at a later point. It will be appreciated that such brackets are sturdy and allow for lateral adjustment of the respective feet of the poles and for lateral access to permit leveling wedges 200, FIG. 3 to drive under the bottom ends of such poles to provide for vertical adjustment as construction progresses.

As will be appreciated by those skilled in the art, the sidewalls of the brackets 181 may be formed with a pattern of through bores for temporary nailing of the bottom of the poles in place at the selected level desired. Angle fittings 202 may be nailed to the opposite sides of the control side poles 111 to temporarily support the bottom edges of the panels 125 and 127 at the level desired while the fastener bolts are inserted.

Selected ones of the interior wall panels 147, 151 and 153 may then be positioned face down on the ground with one vertical edge abutting the side of a pole comparable to the pole 103 for subsequent positioning on the central pier 101 in the middle of the footprint shown in FIG. 25. The pole and edge of the selected panel are then bolted together, hand tightening such panel and pole assembly raised to the vertical position and the free vertical edge of such panel, pre-taped with insulation tape 114, bolted to the interior face of the pole 103 and such panel raised into position. This pre-assembly of the panels and poles will be continued with the front panel 129 being next erected with the front corner pole 113 and the free edge at the center of the dwelling bolted to the pole 103 as shown in FIG. 5.

The side panel 127 and middle side pole 111 may then be preassembled flat on the ground, the assembly erected on the central side pier to the position shown in FIG. 1, and the bolt holes 195 in the frame of such panel aligned with the corresponding bolt holes 197 in the pole 113 and the fastener bolts 201 inserted in place and the nuts 203 hand tightened thereon (FIG. 4). As construction progresses steps will be taken to level and straighten the panels and poles to maintain a general level and squared condition and may involve driving double wedges 200 selected distances into the space between the bottom of selected ones of the poles and bottom plate of the respective monitoring bracket 181 (FIG. 3).

As will be appreciated by those skilled in the art, planar horizontal support cleats, generally designated 207 and 209 (FIG. 31) may be mounted to the underside of the wall panels 123 and 153 by respective screws 211, so configured as to project laterally inwardly in cantilever fashion into the volume formed between such wall panels to temporarily support floor panels. Quarter floor panels 147 may then be inserted into position between the wall panels 123 and 153 as shown in FIG. 31 to nest on the respective support cleats 209 and 211 with the 2x4 framework thereof abutted against the interior surfaces of the respective wall panels and aligned with the respective bottom runs of the respective framework of such wall panels. It will be appreciated that insulation tape 114 will attach about the periphery of respective floor panels 147 to provide for insulation in the space between such panels and the such floor panels and the wall panels. Upper floor panels comparable to the floor panels 147, may then be inserted in an elevated position to act as a ceiling for the lower floor and floor for the upper floor and may be fastened to the framework of the front and side panels by leg bolts or the like generally as depicted in FIG. 8. Typically, this is facilitated by fastening angle brackets to the sidewalls approximately the thickness of the floor from the top edge of such sidewalls and the loft floor panels set in place nesting on those brackets. Interior walls
may then be erected transversely between the longitudinal interior wall described above and the interior edges thereof secured bolted to the interior central poles and the lateral exterior edges thereof bolted to the respective middle side poles 111. It will be appreciated that, with this arrangement, such interior walls will serve as a displaced sheark wall through the center of the structure, affording a displaced sheark when connected with the loft wall panel as discussed below.

The principal end wall panel opposite the panel 121 may then be laid flat and secured along its medial vertical edge to one side of the rear central pole, comparable to the poles 103, by bolting and the opposite side of such panel bolted to the cover pole comparable to the pole 105 and that assembly raised into position on the respective brackets 183. The adjacent side panel may then be erected into position between the corner pole and the middle side pole. The sidewall panel 125 and corner poles 109 may then be assembled and erected into position with the frame along the free edge of such panel bolted to the side pole 111.

The floor panels 147 for the rear end of the dwelling may then be brought in through the opening for the last remaining wall panel and positioned on the support brackets corresponding with the support brackets 207 and 209 as shown in FIG. 31.

The loft panel for the rear corner of the dwelling may then be moved into position and lag secured in toenail fashion by drilling pilot holes and lag receiving to the top frames of the respective wall panels. Care should be exercised to avoid loading the floor panels too heavily until the lag screws are secured in place. The loft wall panel at the rear of the dwelling may then be bolted in place and the final rear wall panel bolted between the corner and corner poles. Gable walls 165 may then be moved into the triangular openings between the respective openings on the opposite sides of the end center poles and the medial framework of such panels bolted to the center pole by bolts 211 as shown in FIG. 7.

After the loft floor panels are on, the integral stairs, generally designated 237 (FIG. 24), and any integral furniture, kitchen unit, beds and other furniture are moved into position but left unattached for the moment.

After positioning of the final wall panel, structure may be straightened and leveled. The squaring up can be achieved by procedures well known to those skilled in the art by taking a diagonal measurement between the inside corners of the poles under and on top of the house as illustrated in FIG. 30 and making the necessary adjustment and shifting of panels to arrive at the desired squared condition and then continuing with the tightening of the bolts to the proper torque setting. During this procedure, the walls panels and floor panels should be checked to make sure they have not shifted from their respective vertical and horizontal positions and to the extent necessary, the leveling wedges 200 adjusted (FIG. 3).

The bottom and left floor panels may then be secured by drilling pilot holes at approximately 30° to the horizontal through the peripheral framework of such floor panels and into the bottom framework of the respective wall panels as shown in FIG. 8 and inserting the lag screws 133 in toenail fashion and tightening them into position.

Thereafter, the stairs 237 and any associated furniture beds and kitchen units may be permanently affixed to the floor in the desired location to distribute the load and supply an overall integrated structure.

A ridge board 241 may then be attached at the peak of the roof between the top ends of the respective center end poles by brackets, generally designated 241 (FIGS. 9 and 10).

The roof panels 171 may then be moved into position as attached between the ridge board 240 and the eves at the top of the respective side wall panels as by hurricane brackets 245 and at the peak of the dwelling, by lag bolts 247.

Once this general construction is completed, it would be appreciated that the windows and doors may be hung and the entire exterior primed to provide a closed sturdy, weather resistant structure.

It will be appreciated that with the construction of the present invention, the panels between the poles are sandwiched in place and lateral loads applied to the building from any direction as by wind forces, will be resisted by the panel and pole structure in the wall resisting the greatest force vector such that the panel construction will act as shear panels to cooperate in resisting such lateral forces. As an optional feature the bottom and loft floor panels are fastened directly to the peripheral framework of the wall panels constrained between the peripheral poles so that, with the overall combination, when such lateral forces are applied, the poles and panels will all cooperate together to carry the shear load in an efficient manner. The construction of the present invention can be preassembled in an efficient manner by relatively unskilled labor, the utility components integrated in the wall panels to be erected quickly and efficiently on site by relatively unskilled labor to provide a rugged low cost dwelling with the floor preferably elevated from the underlying terrain to provide a structure capable of resisting high wind forces and the like to provide utility in geographic areas prone to earthquakes, floods and/or high winds.

I claim:
1. A low cost dwelling comprising:

   a plurality of vertical support poles spaced horizontally apart about the periphery of a dwelling footprint to form therebetween respective panel spans and including a plurality of bores spaced vertically there along in respective predetermined patterns;

   a plurality of rectangular wall panels constructed of sheathing and framework, each formed with opposite vertical sides and so configured and arranged as to be received in the respective spans shuttering the respective adjacent poles, the vertical frames being formed with respective patterns of bores corresponding with the respective predetermined patterns for receipt of bolt fastener therethrough;

   fastener bolts inserted through the respective bores and tightened to draw the respective panels and poles together.
2. The low cost dwelling of claim 1 that includes:
   a floor panel assembly including sheeting and a peripheral framework received in close spaced relationship within the dwelling at the bottom extremities of the respective wall panels; and
   threaded fasteners fastening the framework of the floor panel assembly to the framework of the respective wall panels.

3. The low cost dwelling of claim 1 wherein:
   the vertical poles are arrayed in a rectangular pattern with end runs having respective central end poles projecting upwardly to top ends elevated above the top ends of the remaining poles;
   a peak joist spanning between the top ends of the respective central end poles and secured thereto, and
   roof panels constructed of sheeting and peripheral framework mounted between the peak joist and the wall panels.

4. The low cost dwelling of claim 1 that includes:
   a loft floor assembly constructed of sheeting and loft floor framework configured with a peripheral framework constructed to be received in close fit relationship within the confines of the upper portion of the wall panels; and
   threaded fasteners fastening the peripheral framework of the loft panel assembly to the wall panels.

5. The low cost dwelling of claim 1 wherein:
   the wall panels include utility components preassembled therein.

6. The low cost dwelling of claim 1 that includes:
   pier devices for supporting the respective poles; and
   mounting brackets on the piers supporting the bottom extremities of the respective poles.

7. The low cost dwelling of claim 1 that includes:
   selected ones of the poles being corner poles and including a first set of fastener bores spaced vertically therealong and extending in one direction and a second set of fastener bores spaced vertically therealong in staggered relationship with the first set but perpendicular thereto.

8. The low cost dwelling of claim 1 that includes:
   temporary cleats mounted at the bottom of the wall panels for temporarily supporting floor panels.

9. The low cost dwelling of claim 1 wherein:
   at least some of the poles are corner poles and are constructed with a first pattern of fastener bores extending therethrough in one direction and a second pattern of fastener bores interposed in staggered relation and extending therethrough in another direction.

10. A low cost dwelling of claim 1 that includes:
    insulation tape extending along the edges of the panels.

11. The low cost dwelling of claim 4 includes:
    temporary floor mounting angles mounted to the upper interior surfaces of the wall panels for temporarily supporting the loft floor panel assembly.

12. The low cost dwelling of claim 1 wherein:
    at least some of the poles are interposed in longitudinal alignment between a pair of panels and the bores in at least some of the poles and the adjacent panels are aligned with one another; and
    the fasteners include bolt and nut assemblies inserted through the bores and tightened to draw the respective pair of panels toward the respective at least some of the poles.

13. A low cost integrated dwelling erected on a terrain sloping at a predetermined angle to the horizontal and comprising:
    peripheral piers spaced apart selected span distances and cooperating to define a rectangular periphery of the footprint of the dwelling, the footprint having opposite sides and ends, with at least one pier at each of four corners and a central end pier located centrally on each end and at least one middle pier centrally located in the footprint;
    upwardly opening U-shaped brackets mounted on the respective piers;
    vertical periphery poles erected on the respective brackets of the respective peripheral piers to provide at least one pole at each corner and a central end pole at each end on the respective central end piers and cooperating to define respective spans between adjacent poles and a middle pole on the bracket of the middle pier, the corner poles terminating in top ends disposed at one level and the central end poles terminating in respective top ends disposed at a second higher level;
    side and end wall panels, each constructed of peripheral frames and sheeting and one panel interposed between adjacent poles and terminating in lower ends elevated from the terrain and cooperating to form a floor area;
    a floor panel assembly level with the lower ends of the side and end panels and formed by peripheral frames and sheeting and collectively shaped and constructed to be interposed in the floor area to form a floor and formed with peripheral border frames abutting the frames of the adjacent floor and end panels;
    a peak joist spanning between the upper ends of the central end poles;
    roof panels constructed of sheeting and peripheral frames and so configured and sized as to collectively span between the peak joist and the upper ends of the peripheral poles on the respective sides; and
    fasteners fastening the frames on the opposite sides of each side and end wall panel to the adjacent pole, and the frames at the outer peripheries of the floor assembly with the frames of the respective adjacent side and end wall panels, the frames at the upper sides of the roof panels to the peak joist and frames at the lower sides of the roof panels to the upper extremities of the side panels to structurally join the respective side and end wall panels to the poles and floor and side and end wall panels and roof panels and peak joist and side poles to form a shell of the respective panels and poles cooperating to withstand shear loads applied to the exterior of the shell.
14. A method of constructing a low cost dwelling at an erection site and including:

selecting a footprint of the dwelling;
selecting a dwelling design to provide a predetermined volume with a predetermined peripheral exterior and interior footprint defined by side and end runs;
selecting a suspension skeleton for the dwelling made up of primary and secondary poles having top and bottom ends and to be spaced apart selected horizontal spans from one another about the periphery of the footprint;
constructing primary and secondary wall panels of sheeting bounded by peripheral panel frames to cooperate in forming individual widths corresponding with the respective horizontal spans;
constructing pairs of piers at the erection site spaced apart about the sides and end runs at horizontal locations spaced from one another corresponding with the respective spans;
inserting tensioning fasteners to fasten the respective primary wall panels loosely between the selected pairs of the poles;
positioning the bottomed ends of the respective poles on corresponding pairs of the piers along the periphery and raising the upper ends of the selected pairs of poles to position them and the respective panels hung there from in an erect position extending along portions of the periphery of the footprint first edges of selected ones of the secondary wall panels to selected ones of secondary poles to form secondary wall assemblies;
erecting the secondary wall assemblies and fastening the free edges of the secondary wall panels to selected primary poles to cooperate with the primary panels to form the interior footprint;
constructing a floor panel assembly of sheeting and a peripheral frame in the configuration of the interior footprint;
positioning the floor panel assembly in the interior footprint with abutting the bottoms of the wall panels; and
squared up the poles and wall panels and tightening the tensioning fasteners.

15. A method of constructing a low cost integrated dwelling including:

assembling wall and floor panels of sheet and peripheral framework at one location in jigs;
drilling selected patterns of bolt bores at selective locations in the framework along the opposite sides of the wall panels;
selecting a plurality of suspension poles to suspend there between respective wall panels;
drilling respective patterns of bolt bores in the poles at locations corresponding with selected patterns;
selecting an erection site;
installing piers at selected locations at the dwelling site remote from the one location;
transporting the panels and poles from the one location to the erection site;
bolting a selected pair of the poles to a wall panel using the bores as to form an initial panel assembly;
erecting the initial panel assembly with the selected pair of poles supported on a pair of the piers;
sequentially fastening at least one selected pole to a corresponding edge of a secondary wall panel to form respective secondary panel assemblies and erecting the secondary panel assemblies with at least one selected pole supported respective corresponding piers at the free edges of the secondary wall panels abutting the side of respective adjacent poles;
bolting free edges of the secondary panels to adjacent poles with the panels in alignment with the poles and sandwiched therebetween to form a peripheral wall construction;
installing the floor panels at the bottom of the walls; and
fastening such floor panels to the bottom of the walls.

16. A low cost dwelling comprising:

a plurality of vertical support poles spaced horizontally apart about the periphery of a dwelling footprint to form an erect between the respective panel spans;
a plurality of rectangular wall panels constructed of sheeting and framework and interposed in alignment between adjacent poles, each formed with opposite vertical sides and so configured and arranged as to be received in the respective spans; and
fasteners fastening the wall panels to the respective poles.

17. The low cost dwelling of claim 16 wherein:

the fasteners are tension fasteners.

18. The low cost dwelling of claim 16 includes:

floor and roof panel assemblies spaced vertically apart and received in close fit relationship within the confines of the wall panels; and
screw thread fasteners fastening the floor panel assemblies directly to the wall panels.

19. The low cost dwelling of claim 16 erected on a terrain sloping at a predetermined angle to the horizontal and wherein:

the wall panels terminate in bottom ends disposed on a horizontal plane spaced above the terrain; and
the dwelling includes floor panels suspended from the wall panels and elevated above the terrain.

20. The low cost dwelling of claim 16 wherein:

the wall panels are constructed of sheeting and framework pre-assembled at a manufacturing site.