M. A. NIERNSEE.

PORTABLE HOUSE.

APPLICATION FILED APR. 28, 1915.

1,178,338.

Patented Apr. 4, 1916.

3 SHEETS—SHEET 1.

Fig. 10.

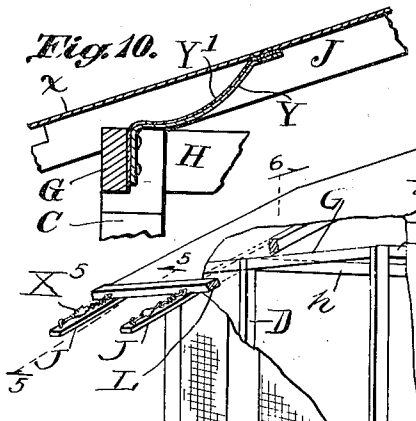


Fig. 1.

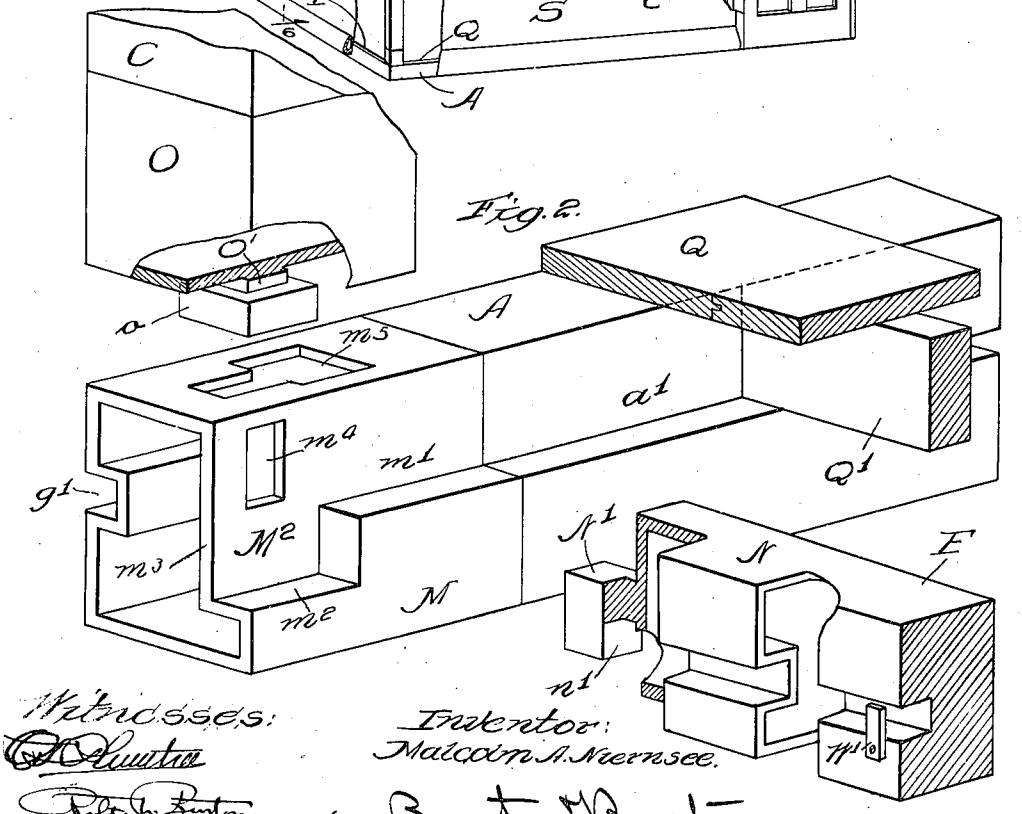


Fig. 2.

Witnesses:

Inventor:
Malcolm A. Niernsee.

by Burton & Burton

Attys.

M. A. NIERNSEE.

PORTABLE HOUSE.

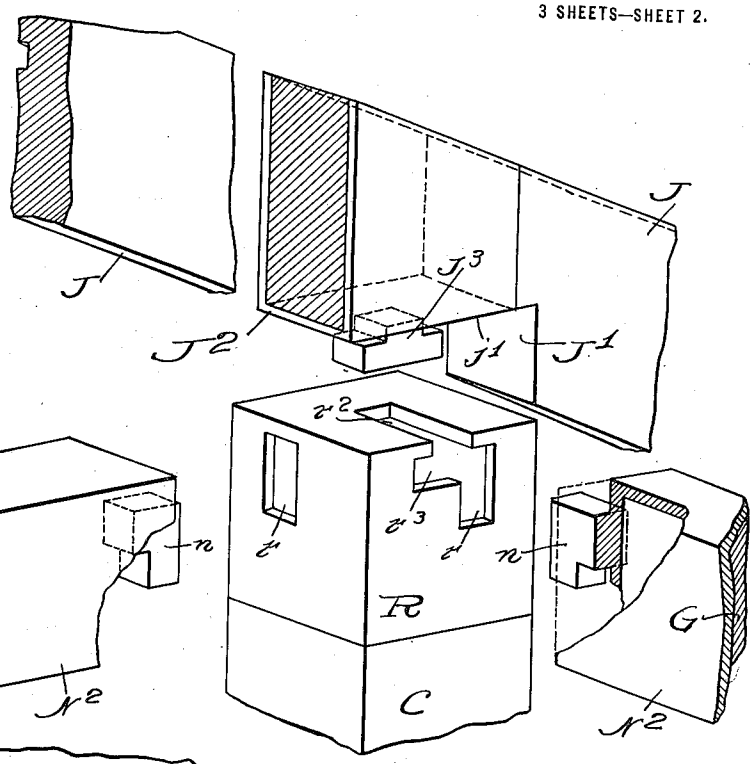
APPLICATION FILED APR. 28, 1915.

1,178,338.

Patented Apr. 4, 1916.

3 SHEETS—SHEET 2.

Fig. 3.



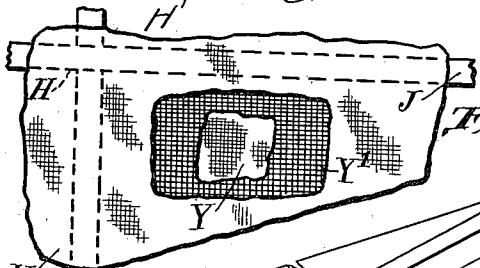


Fig. 11.

Fig. 4.

Fig. 5.

Witnesses:

Inventor:
Malcolm A. Niernsee,
by Burton & Burton
Their Attys.

M. A. NIERNSEE.

PORTABLE HOUSE.

APPLICATION FILED APR. 28, 1915.

1,178,338.

Patented Apr. 4, 1916.

3 SHEETS—SHEET 3.

Fig. 6.

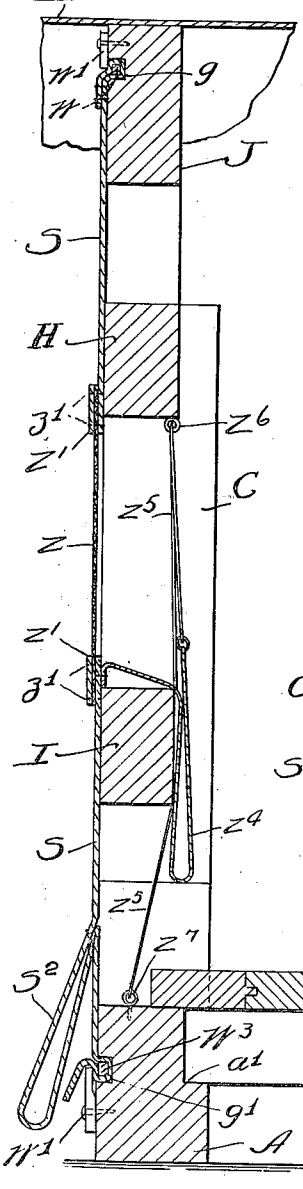


Fig. 7.

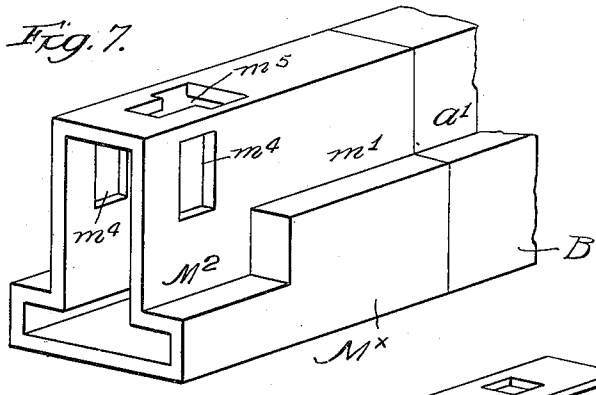


Fig. 9.

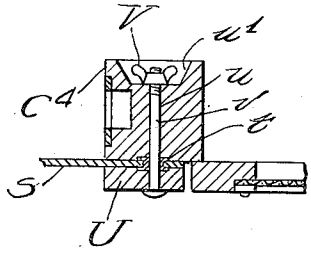
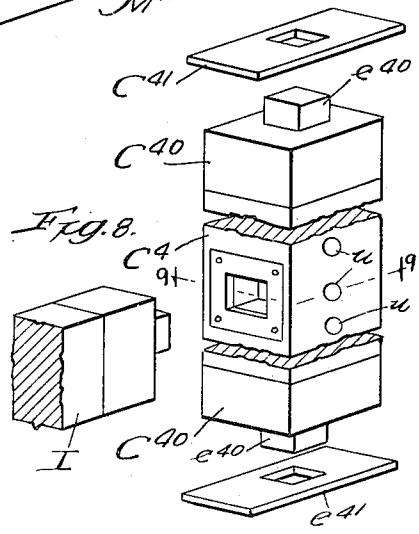


Fig. 8.



Witnesses:

Inventor

Malcolm A. Niernsee

by Burton & Burton

Its Attys.

UNITED STATES PATENT OFFICE.

MALCOLM A. NIERNSEE, OF NEW YORK, N. Y.

PORTABLE HOUSE.

1,178,338. Specification of Letters Patent. Patented Apr. 4, 1916.

Application filed April 28, 1915. Serial No. 24,423.

To all whom it may concern:

Be it known that I, MALCOLM A. NIERNSEE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Portable Houses, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide an improved construction in small portable houses.

It consists in the elements and features of construction shown and described, as indicated in the claims.

In the drawings: Figure 1 is a perspective view of a house constructed according to this invention, a portion of the roof covering and of the inclosing wall being broken away to disclose the frame structure. Fig. 2 is a perspective view of the parts of the frame structure which are united at a lower corner, showing the joint at such corners dissected. Fig. 3 is a similar view of a joint formed at the upper end of one of the corner posts with the rafter and top rail, showing said parts of the joint dissected. Fig. 4 is a vertical section of the frame structure at the line, 4—4, on Fig. 1. Fig. 5 is a vertical section at the line, 5—5, on Fig. 1. Fig. 6 is a vertical section at the line, 6—6, on Fig. 1. Fig. 7 is a perspective view of one end portion of a main sill and a junction-fitting thereon. Fig. 8 is a perspective dissected view of an upright door post and its junctions. Fig. 9 is a section at the line, 9—9, on Fig. 8. Fig. 10 is a detail vertical section across the upper side corner of the house, that is, through the eaves, for showing a closure for the air gap under the roof between the rafters. Fig. 11 is a detail plan view showing the same feature.

The frame structure of the portable house shown in the drawings comprises side main sills, A, at the opposite sides and intermediate main girders, B, and secondary girders, *b*, to any number according to the size of the house, four upright corner-posts, C, and intermediate posts, D, to any number according to the size of the house; bottom longitudinal sills, F, extending from main sill to main sill, end wall plates, G, extending across the gable ends of the house, and side wall plates, H, extending from gable to gable at the opposite sides under the eaves, also as many intermediate top rails, *h*, as there are intermediate posts, D; rafters, J, ridge-pole, K, and roof-stretcher bars, L. The front and rear sills A are joined to the corner-posts and to the side sills, F, by means of metal fittings applied to the several parts united at said joints which will now be described. On the end of each main sill at the point at which it is to be united with the other members at the joints, there is fitted a metal sleeve, M, which is, in general, rectangular, corresponding to the form of the sill, and made of cast iron or other suitable metal about 3/16ths of an inch thick, the sill being reduced on all four sides to the amount of said thickness in order to accommodate the sleeve with its outer surface flush with the outer surfaces of the remainder of the sill. The sill is rabbeted over the entire length of its upper inner corner, as seen at a^1, and the form of the sleeve at the portion of its length which is passed onto the sill, corresponds to the cross-section of the sill with this rabbet. In addition to the rabbet, m^1, corresponding to the rabbet, a^1, the sleeve is formed with an angular recess, M^2, in the upper side at its inner side and outer end, said recess or seat being therefore continuous with the rabbet at the end and opening down from the lower side of the rabbet. This recess, M^2, is designed to form a seat m^2, for lodgment of the end of the side sill, F, and said side sill, F, is furnished at the end designed for such lodgment with a metal cap, N, made of cast iron or other suitable material about 3/16ths of an inch thick, said bottom side rail being cut away on all sides to accommodate the thickness of the cap and leave it flush at the outer side with the surfaces of the sill. From the end or head of this cap a hook, N^1, projects being preferably formed integrally with the cap, said hook having its nose, n^1, turned downward.

In the vertical wall, m^3, of the recess, M^2, which is continuous with the vertical side of the rabbet, m^1, there is an aperture, m^4, of suitable size to admit the hook, N^1, and positioned with respect to the bottom, m^2, of the recess and position of the hook, N^1, so that the hook being entered through the aperture, m^4, by direct thrust of the side-sill into the recess may have its nose, n^1, engaged with the lower margin of the aperture by the lowering of the side-sill to lodgment upon the seat or lower side, m^2, of the recess, M^2. The corner post, C, is designed

to be stepped upon the top of the sleeve, M, and for that purpose and to provide means of junction with the sill, the lower end of the post is provided with a metal cap, O, similar in respect to its mounting on the post to the cap, N, and having projecting from its lower face or head a headed stud, O^1, the length of the shank of the stud,—that is, the distance from the face of the cap to the proximate side of the head,—being substantially equal to the thickness of the shell of the sleeve, M; and in the upper side of that sleeve there is formed a T-shaped slot, m^5, whose cross member is adapted to admit the head, o^1, of the headed stud, O^1, the stem member of the T-shaped slot being adapted to admit the shank of the stud, so that the post having been placed in position by inserting the head through the cross-slot may be moved slightly toward the end of the sleeve to bring the shank into the stem portion of the T-slot, the parts being positioned and proportioned so that the outer side surface of the post is flush with the end of the sleeve, M, when the shank of the stud reaches the end of the stem portion of the T-slot. When girders, B, are required in view of the dimensions of the house, such girders are furnished with terminal sleeves, M^x, (see Fig. 7) which have the rabbet, m^1, the recess, M^2, for the side sills and hook aperture, m^4, duplicated on opposite sides for receiving and affording connection for the ends of side sills extending both ways from such girder. In addition to the main girders there are provided intermediate secondary girders, *b*. These intermediate secondary girders are provided at their ends with sleeves similar to the sleeves, M^x, except that they do not require and need not be provided with the T-shaped slot for connecting an upright post. As a matter of convenience, however, only one form of these sleeves need to be provided for all intermediate sills, both main and secondary. The floor is constructed in sections of matched boards, Q, secured together by cross-cleats, Q^1, placed at comparatively short intervals in the length of the boards. The cross-cleats are of such length as to extend from main sill to sill and from girder to girder, their ends being lodged in the rabbets, a^1, of the sills and girders which are of such depth as to accommodate the cross-cleats and bring the under surface of the floor board in the plane of the top surface of the main sills and side sills, so that said boards may extend over and cover the main and side sills. This involves placing the cross-cleats nearest to the end of the floor boards at least as far back from those ends as the width of the side sills, and one end of the cross-cleats as far back from one edge of the floor section as the width of the top surface of the main sills between the rabbets, a^1, so that the adjacent boards of consecutive groups will meet and interlock their tongue-and-groove engagements and cover the sills.

For making the joint which is necessary at the top of each upright corner-post, where it meets a rafter and a side wall plate extending in each direction from the corner, there is provided on the top of the post a metal cap, R, having in each of the two inner side walls a vertically-extending slot *r*, adapted to receive the hook, *n*, of the cap, N^2, with which the side wall plates are provided, in the same manner as the side sills, F. The rafter, J, has in its lower edge a notch, J^1, forming a downwardly-facing horizontal shoulder, j^1, adapted to seat upon the flat top of the cap, R; and for such seating and connection there is provided a metal saddle, J^2, which embraces the rafter at said shoulder and has projecting from its lower horizontal web a cross-headed stud, j^3, and the cap, R, has in its upper horizontal head or web, a slot, r^2, extending to the vertical side of the cap which is parallel to the rafter, and in said vertical side immediately below the cap web there is formed a horizontally-extending slot, r^3, which crosses and connects with the slot, r^2, and is adapted to receive the cross-head of the stud, j^3, the shank of the stud being adapted to enter the slot, r^2, by sideward movement of the rafter. The slot, r^2, terminates so as to stop this sideward engaging movement of the stud with the lateral surface of the rafter flush with the lateral surface of the post. The vertical slots in the two sides of the cap fitting, R, terminate at their lower ends at such position with respect to the position of a hook, *n*, which engages them as to cause such engagement to be complete when the upper surfaces of the plates are flush with the top of the post cap; and the horizontal shoulder or upper side of the saddle, J^2, extends inward beyond the inner vertical side of the post so as to lap over the upper edge of the wall plate connected at that side. The order of assembling these parts, it will be understood, is first to connect the wall plate which is in the vertical plane of the rafter; next, to connect the rafter, which will cause the saddle extending over the top of the first-connected wall plate to lock said wall plate in position; next, to connect the side wall plate extending in the other direction from the corner, which will cause it to lock the rafter in position. For the top junction of the post which extends up from the intermediate main sill, the same fittings will be employed, advantage being taken of vertical slots, *r*, in the both sides of the cap facing the corner posts for connection of wall plates extending toward both corner posts.

The two rafters of each pair, one for each

slope of the roof, are hinged together by strap hinges, j^5, having their respective members bolted to the under edges of the rafters to be joined by them, the pintles being secured by wing nuts, j^6. Each rafter is notched or rabbeted at the end on the upper side at such an angle that the two rabbets facing each other when the rafters are in position form an upwardly-open rectangular seat for the ridge pole, K, which is a rectangular bar or scantling, (see Fig. 4). The ridge pole, K, is made in sections each long enough to extend from rafter to rafter and to overhang at the gable-end suitably for supporting the overhang of the roof at the gables. The meeting ends of the ridge-pole sections are complementarily rabbeted as seen at k^1, Fig. 4, adjacent to the rafter at which they meet, and are detachably hinged together, the hinge pintles being secured by wing nuts, k^2. This sectional construction of the ridge pole makes it possible for one man to handle the parts in assembling the structure.

At either gable end of the structure two of the upright posts are positioned at a suitable distance apart to form the opposite sides of a door-casing, preferably one of the corner posts is utilized for one side of the door casing and an intermediate post, C^4, is extended from the bottom sill at that end to the wall plate. This intermediate post is preferably provided with metal caps, C^{40}, which take into suitably apertured plates, C^{41}, C^{41}, mounted on the sill and top rail respectively, in lieu of customary tenon-and-socket joints directly between the posts and the horizontal members. Horizontal rails, I, may be extended around the house on all four sides except in front of the door-way, at usual chair-board height, such rails being connected by tenon-and-socket joints with the upright posts in a customary manner requiring no tools for connecting or disconnecting them. The inclosing fabric wall hereinafter described effectually prevents disengagement of such rails from the posts, which might, in the absence of prevention, happen by the springing of the posts.

For inclosing of this house there will be employed suitable fabric such as heavy canvas or khaki made in one continuous strip, S, extending around the house from one side of the door to the opposite side of the door, any necessary number of seams being made joining up several pieces in order to produce one continuous stretch of the fabric from securement at one end at one side of the door to its securement at the opposite end at the other side of the door. For securing it as indicated to the opposite door posts, the vertical edge of the fabric is clamped between the door post and a clamping strip, U, which also serves as the facing of the door-casing, bounding the seat into which the door shuts against the two posts. For thus clamping the end of the fabric, it will be provided with a suitable number of gromet eyes, t, and the post and clamping strip will be provided with a corresponding number of bolt-holes, u, and bolts, v, with winged nuts, V, are inserted through the bolt-holes and the gromet eyes, the wing nuts being on the inner side posts in which counter-bores, u^1, are provided for receiving the wing nuts so that they will not protrude inconveniently in the room. When the fabric wall has been stretched around the house from one door-post to the opposite door-post and secured in the manner described, it will be secured at the upper edge to the top rails, G and H. For this purpose the upper edge of the fabric is provided with a hem, S^1, forming a casing for rods, W, and on the outer surface of the top rails there are formed grooves, g, of suitable size to receive the rods when they are inserted in the hem or casing, S^1, in the upper margin of the fabric wall; and for retaining them thus buttons, W^1, are mounted at frequent intervals on the top rails adapted to be turned over the margin of the fabric wall across the grooves and fabric-incased rods lodged therein. The lower side of the fabric wall is designed to be secured to the sills and bottom rails, which are provided on said outer surface with grooves, g^1, into which the fabric may be forced by rods, W^3, and secured by buttons, W^1, in the same manner as the upper edge of the curtain is secured to the top rails. To protect this lower edge fastening of the fabric wall to the bottom rails, and serve as a water table for delivering the water which may flow down the sides of the fabric wall off from the structure, the fabric wall is provided at a few inches above its lower edge with a wide tuck, S^2, folded on the outer side and tending by reason of the stiffness of material to project outward with a downward trend at an oblique angle, this tuck being of sufficient width and placed sufficiently near the lower edge to overhang the engagement of said edge in the grooves of the sills and bottom rails. This tuck also serves as a means by which the wall may be stretched taut by hand before being secured to the sills and bottom rails in the manner described.

Windows,—light and air openings,—in the fabric walls are made without defeating the continuity necessary to adapt the wall fabric to be stretched taut both around the frame and vertically as described,—by applying at all such light and air openings wire cloth inserts, Z, preferably made of copper wire so as to be rustless and tough. Such wire cloth inserts are applied either inside or outside the wall lapping the margins of the openings all around and having their edges and lapping areas covered by fabric strips, Z^1, and secured by sewing through

the wall fabric, wire cloth and covering strip by at least two lines of stitching, z^1, z^1.

For closing the air and light openings to secure privacy or warmth, permanently mounted curtains, Z^4, are made of any suitable fabric having their lower ends secured to the fabric wall below the openings respectively and having cords, Z^5, from their upper ends running through screw eyes, Z^6, screwed into the top rails and back through screw eyes, Z^7, screwed into the sill or bottom rail where the cord may be tied to hold the curtain drawn up to any desired extent.

For covering this structure a fabric roof member, X, is provided in a single sheet or blanket (though it may be made of any number of pieces suitably seamed together) of suitable length to extend over the ridge poles down both slopes of the rafters and to a suitable distance beyond the sides of the frame structure to constitute properly overhanging eaves. Each end of this fabric roof member is provided with a wide hem, X^1, through which there is inserted a stretcher bar, L, the bar being so disposed in the hem as to project its thickness entirely at the inner or under side of the fabric. The rafters are cut away at their upper edges for a distance back from their ends, forming slide seats, J^5, for the stretchers and shoulders, j^5, beyond or below which the stretcher bars, L, are lodged on the slide seats when the fabric roof is laid normally in position over the rafters. Screw-eyes, X^3, inserted through gromet eyes, x^3, in the edges of the hems, X^1, and screwed into the stretcher bars, L, are connected by coiled springs, X^4, with turn buckles, X^5, the opposite ends of the turn-buckles being connected to screw-eyes, X^6, set into the rafters at the outer ends of the slide seats, J^5, and the parts are so proportioned that by operating the turn-buckles, the roof fabric may be stretched taut over the ridge-pole to any necessary extent, the springs, X^4, being put under tension in the process, but being adapted to yield upon the shrinking of the fabric, and to contract when the fabric slackens from any cause, and thereby to keep the fabric roof at all times taut over the ridge pole and rafters.

To form closures for the air gap which would otherwise exist between the fabric roof covering, X, and the side wall plates, G, in the intervals between the rafters, and for excluding insects and vermin, there are provided fabric strips, Y, secured to the underside of the roof fabric, X, extending between the rafters from said roof fabric down to the wall plates and secured to the inner side of the latter, said fabric strips being left slack between their securements to the roof fabric and to the wall plate respectively. Preferably these closures, Y, are provided with a woven wire screen lining, Y^1, similarly secured at the respective ends to assist in excluding vermin.

I claim:—

1. In a portable house in combination with a sill and an upright member or post, a fitting for connecting the sill and post consisting of a metal cap applied on the end of the post, and having projecting from its head web a stud with a cross-head, and a metal sleeve applied to the sill and having at one side a T shaped slot dimensioned for admitting the cross-head of said stud in its cross slot and the neck of the stud in its stem slot.

2. In a portable house in combination with a sill and a frame member transverse thereto, fittings for connecting them, comprising a metal cap applied to the end of the transverse member and having a hook projecting from its head web, and a metal sleeve applied to the sill having at one side a rabbet forming a seat for the transverse member and having an aperture in the vertical side of the rabbet adapted to admit said hook and positioned for engagement of its lower margin by the hook when the cap is seated on the horizontal side of the rabbet.

3. In a portable house, in combination with a sill, another horizontal member and an upright member or post meeting at a common joint, fittings for uniting them at such joint comprising a cap on the end of the post provided with a cross-headed stud projecting from the head or end web of the cap; a cap on the end of said other member having a hook projecting from its head or end web, and a sleeve on the sill having a rabbet in one side forming lodgment for the second mentioned cap, and having in its top web a T-shaped aperture for engagement of the cross-headed stud of the post cap, and in the vertical side of the rabbet, an aperture for engagement of said hook.

4. In a portable house, in combination with an upright member or post and a rafter, means for connecting them together consisting of a cap covering the end of the post, having in its web a slot extending to one corner and a slot in the vertical web extending crosswise of the first slot, and communicating therewith, the rafter having in its lower edge a notch forming a horizontal shoulder for lodgment upon the top of the post cap, and a metal saddle applied on said shoulder having projecting downward from it a cross-headed stud dimensioned for the entrance of its shank or stem in the slot of the post cap, and the entrance of its cross-head through the cross-slot of said cap.

5. In a portable house, in combination with an upright member or post, a horizontal frame member and a rafter meeting at a common joint; metal fittings on the post,

rafter and horizontal member, respectively for effecting their junction at said joint, the said fittings being each separately adapted for engagement with the post fitting, the fitting of the horizontal member being engageable with the post fitting by downward movement of said member, and the rafter fitting being engageable with the post fitting by lateral movement of the rafter, the rafter fitting being extended to overhang and prevent upward movement of the horizontal member when both the latter and the rafter are at engaged positions.

6. In a portable house, in combination with an upright member or post, a rafter and a longitudinal rail meeting at a common joint; metal fittings on said several members by which they are united at such joint, the post fitting having an aperture for engagement by the rafter fitting, and said rafter fitting being adapted for such engagement by lateral movement to enter the aperture, the rail fitting being adapted to engage the post fitting by downward movement of the rail and proportioned for blocking the aperture through which the rafter fitting enters at the engaged position of the rail.

7. In a portable house, in combination with an upright member or post, a transverse frame member and a rafter meeting at a common joint; means for securing them together at such joint consisting of a cap covering the end of the post having in one vertical wall a vertically-extending slot; a metal cap on the end of the transverse member having a hook projecting from its end web adapted to be entered in said slot of the post cap, and to be engaged at the lower margin thereof, by depression of the transverse member after the hook is thus entered, said slot in the post-cap and said hook on the cap of the transverse member being relatively positioned to come into complete engagement as described with the top of the transverse member flush with the top of the post-cap, the post-cap having in its top web a slot extending transversely of the direction of the transverse member and a cross-slot at one end thereof communicating therewith, the rafter having at its lower edge a notch forming a horizontal shoulder for lodgment upon the top of the cap, and a metal saddle applied to said shoulder, having projecting downwardly from it a cross-headed stud for engagement with the slot in the top of the post-cap, said saddle having its lower side from which said cross-headed stud projects extending beyond the side of the post-cap at which the transverse member is connected thereto for lapping upon the top of the transverse member after the latter is connected as described.

8. In a portable house, in combination with an upright member or post, a rafter and a longitudinal rail meeting at a common joint; means for securing them together at such joint consisting of a metal cap applied on the top of the post having in its top web a slot extending in the longitudinal direction of the side rail, opening out through the edge of the cap, and a slot in the vertical web adjacent to the under side of the top web extending cross-wise of the first-mentioned slot and communicating therewith, said vertical web having a vertically-extending slot communicating with said cross-slot, the rafter having in its lower edge a notch forming a horizontal shoulder for lodgment upon the top of the cap, a metal saddle applied to said shoulder having a downwardly-projecting cross-headed stud for engagement with the slot in the top web of the cap by entry of its cross-head through the said cross-slot and its shank through the longitudinal slot of the cap of the top web, and a cap applied on the end of the side-rail, having a hook in its end web or head adapted to be entered through said vertical slot, and to be engaged with the lower margin thereof when the side-rail is depressed so as to be flush at its upper edge with the top of the post cap.

9. In a portable house, in combination with a frame structure comprising upright posts and horizontal rails and sills connecting the upright posts; a fabric wall having its vertical end edges secured to vertical posts of the frame, and extended around the frame structure there-between, one horizontal edge of the fabric being hemmed to form a casing, and rods in such casing; a corresponding horizontal rail of the frame having a longitudinal channel adapted to receive the incased rods, and buttons on said horizontal rail adapted to be turned cross-wise of the incased rods for retaining them in the channels.

10. In a portable house, in combination with a frame structure comprising upright posts and horizontal rails or sills, a fabric wall having its upper horizontal edge secured to an upper horizontal rail, and its lower horizontal edge secured to a lower horizontal rail, and having near the lower edge a tuck folded outwardly, adapted to protrude obliquely with a downward inclination from the vertical surface of the web as a water-table or water-shed to divert the water from the lower edge securement of the web.

11. In a portable house, in combination with a roof frame structure comprising rafters, a roof covering consisting of fabric lodged upon the rafters; marginal rails secured to the opposite ends of the fabric, and lodged cross-wise on the rafters; connections from the marginal rails to the rafters extending from said rails outwardly along

the rafters, said connections comprising springs and means for shortening said connections against the tension of the springs.

12. In a portable house, in combination with a roof frame structure comprising rafters, a fabric roof covering lodged upon the rafters; marginal rails secured to the opposite ends of the fabric and lodged crosswise upon the rafters; turn-buckles connected with the marginal rails and with the rafters at points outwardly beyond said marginal rails, and spring interposed in the connections made by the turn-buckles between the marginal rails and the rafters.

13. In a portable house, in combination with a roof frame structure, an upright frame structure upon which said roof frame structure is lodged, comprising side wall plates, the roof frame structure comprising sloping rafters which cross said wall plates above the latter, a roof covering comprising fabric stretched over the rafters and extended out beyond the vertical frame structure, and rafter closures consisting of fabric secured to the under side of the roof fabric extending between the rafters from said roof fabric down to the wall plates, and secured to the inner side of the latter, said fabric being slack between its securement to the roof fabric and its securement to the said wall plate.

14. In a portable house, in combination with an upright frame structure comprising a wall plate and a roof frame structure comprising rafters lodged upon said wall plate, a roof covering comprising fabric stretched over the rafters extending outward beyond the wall plate, and members for closing the opening between the rafters and the wall plate, consisting each of a piece of fabric and a lining of woven wire screen, both secured at one end to the roof fabric between the rafters, and at the other end to the wall plate, and slack between said two securements.

15. In a portable house, in combination with an upright frame structure comprising wall plates and a roof frame structure comprising rafters lodged upon said wall plates, a roof covering consisting of fabric stretched over the rafters and extending thereon outward beyond the wall plates at the opposite sides of the house; an inclosing wall consisting of fabric stretched about said upright frame structure and joined at its upper edge to the said wall places at the outer side thereof, and closures for the gaps between said rafters and the roof covering and the wall plates consisting of fabric members secured to the under side of the roof fabric at a short distance inward from and above the wall plates, and extending from said lines of securement between and closely adjacent to the rafters down to the inner surface of the wall plates and secured thereto.

16. In a portable building, rafters in pairs, two of each pair being hinged together for folding to extend down along the opposite slopes of the roof and having at their meeting ends rabbets positioned obliquely to the length of the rafters at such angle that the two rabbets form an upwardly open seat for a ridge-pole, in combination with a ridge-pole composed of sections having their meeting ends complementarily rabbeted and interlapped and hinged together for folding transversely to the plane of the longitudinal face of the rabbets, said ridge-pole being seated at said lapped joint in the said seat formed by the rabbets of the rafters with the hinged pintle of said ridge-pole joint adjacent to the side of the rafters.

In testimony whereof, I have hereunto set my hand at 127 East 34″ St. N. Y., this 22 day of April, A. D. 1915.

MALCOLM A. NIERNSEE.

Witnesses:

HERMAN K. HACK,

GEORGIANA REUBERT.