April 21, 1942. J. A. CONNELLY 2,280,687

PORTABLE HOUSE

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Fig. 1.

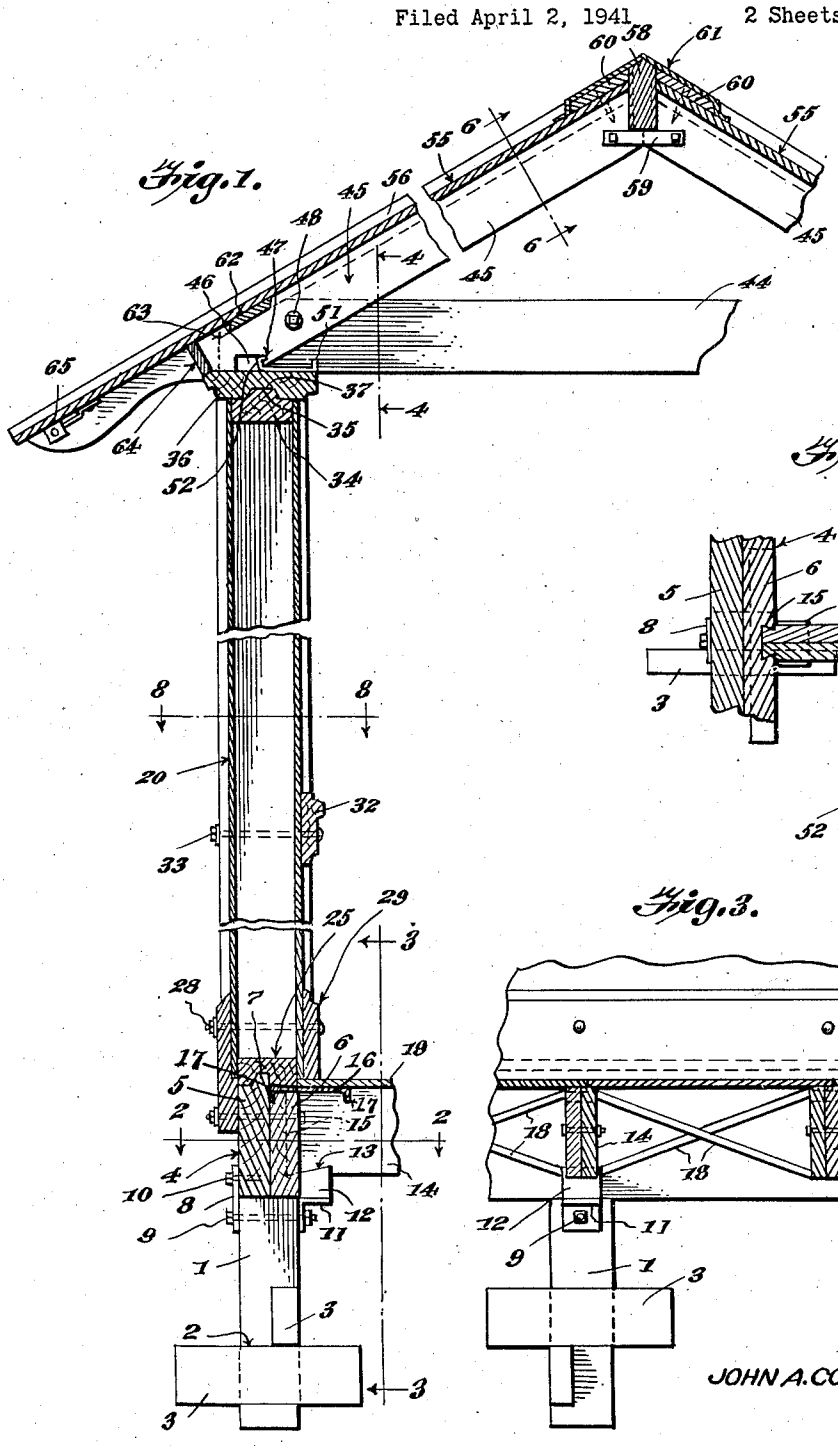


Fig. 2.

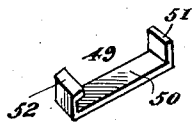


Fig. 11.

Fig. 3.

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Fig. 4.

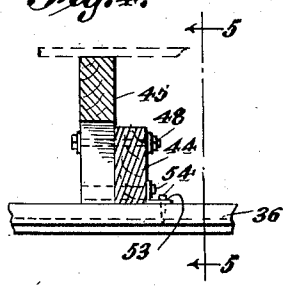


Fig. 5.

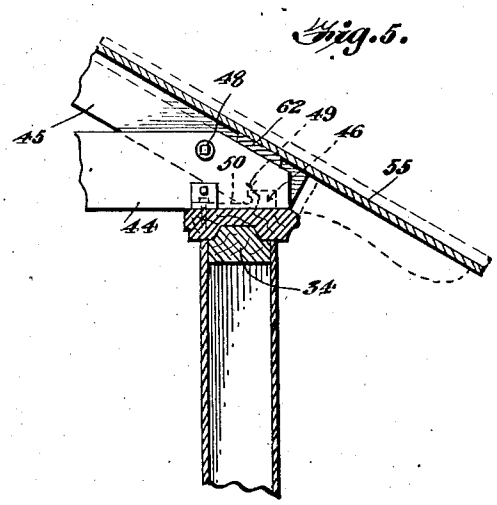


Fig. 6.

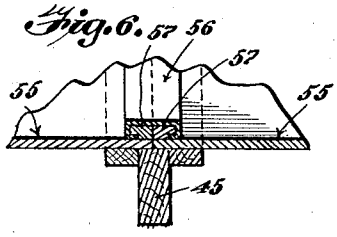


Fig. 8.

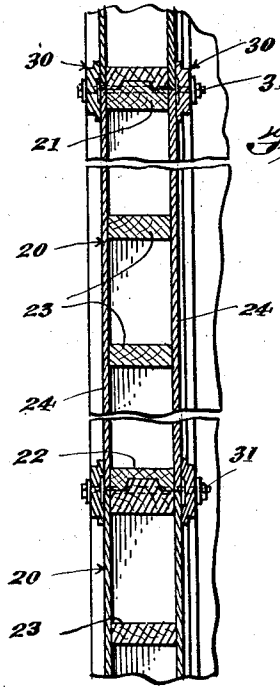


Fig. 7.

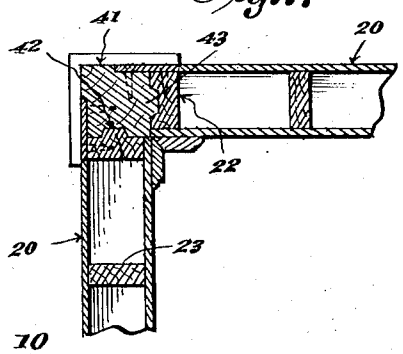


Fig. 9.

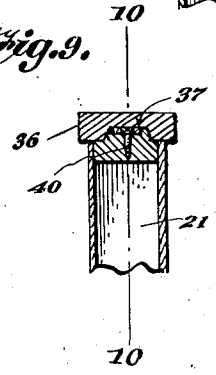
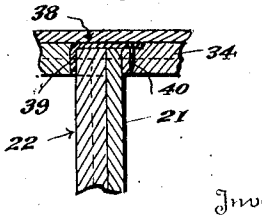


Fig. 10.



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UNITED STATES PATENT OFFICE

2,280,687

PORTABLE HOUSE

John A. Connelly, Southern Pines, N. C.

Application April 2, 1941, Serial No. 386,555

6 Claims. (Cl. 20—2)

This invention relates to a portable house or a bungalow.

An object of the invention is to provide a house that will meet the standards of good construction and can be sold at a price low enough for the person of average means to buy.

Another object of the invention is the construction of a house which is simple and efficient, and which an ordinary person can assemble or construct without using a sheet of instructions.

A still further object of the invention is the construction of a house which is of such units as can be easily transported, although when the units are assembled a very durable and efficient dwelling or building will be produced.

With the foregoing and other objects in view, the invention comprises certain novel constructions, combinations, and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a fragmentary vertical sectional view of a house constructed in accordance with the present invention.

Figure 2 is a sectional view taken on line 2—2, Figure 1, and looking in the direction of the arrows.

Figure 3 is a sectional view taken on line 3—3, Figure 1, and looking in the direction of the arrows.

Figure 4 is a sectional view taken on line 4—4, Figure 1, and looking in the direction of the arrows.

Figure 5 is a sectional view of the roof structure taken on line 5—5, Figure 4, and looking in the direction of the arrows.

Figure 6 is a sectional view taken on line 6—6, Figure 1, and looking in the direction of the arrows.

Figure 7 is a fragmentary horizontal sectional view of the house, showing particularly the details of one of the corners.

Figure 8 is a horizontal sectional view taken on line 8—8, Figure 1, and looking in the direction of the arrows.

Figure 9 is a fragmentary vertical sectional view, showing particularly part of the horizontal plate and one of the side sections.

Figure 10 is a sectional view taken on line 10—10, Figure 9.

Figure 11 is a perspective view of one of the roof rafter anchor devices.

Referring to the drawings by numerals, 1 designates a foundation post, any number of which may be used in the construction of the house. This post is suitably treated, and is provided with sockets 2 into which are spiked, or otherwise secured, anchor plates 3; these plates 3 are preferably positioned at right angles, as clearly seen upon referring to Figures 1 and 3. On top of each post 1 rests a sectional sill 4. This sill 4 comprises an outer section 5 and an inner section 6. The outer section 5 is provided with an upstanding tongue 7. A plate 8 is placed on the outside of post 1 and section 5 and serves to hold the sectional sill and the foundation post together; this plate 8 is secured in position by bolts 9 and 10. Bolt 9 extends through the post 1, and mounted thereon, near its inner end, is angle bracket 11. Angle bracket 11 supports a horizontal block 12. Block 12 is bevelled upon its upper edge, with the bevel extending downwardly and inwardly, and this bevelled upper edge fits into a socket 13 formed in the bottom edge of the sectional floor joist 14. Each sectional floor joist 14, Fig. 2, is provided with a dovetail 15 on its outer end and this dovetail fits into a dovetail socket formed in the inner section 6 of the sectional sill 4. The inner section 6 of the sill 4 is flat, upon its upper edge, and resting on this flat edge is anchor plate 16; this anchor plate is provided at its ends with downwardly-extending flanges 17. The inner flange of plate 16 extends down between the outer section 5 and the inner section 6 (Fig. 1) while its outer flange extends down into the floor joist, whereby the floor joist and the sill are more positively tied or locked together. The floor joists 14 are braced by the cross bridging 18. The floor 19 is fastened upon the joists 14.

The sides of the house comprise a plurality of side sections 20 (Fig. 8); each section 20 comprises a tenoned stud 21, a socketed stud 22, intermediary studs 23 and sheets of waterproof plywood 24. These plywood sheets are suitably fastened to the studs by any ordinary means. Each section 20 is provided with a horizontal spacing or framing strip 25 (Fig. 1) which is socketed on its lower face to receive the tongue 7 of the outer section 5 of the sill 4. This tongue 7 centers the section upon the sill and serves to hold the section in position temporarily until the outside ceiling board 26 is placed in position, whereupon the bolts 27 and 28 are placed; bolt 27 extending through the sill 4 as shown, and the bolt 28 extending through the section 20 as well as through the baseboard 29, whereupon the section is securely fastened in place. It is to be noted that each section 20 has a tenon stud

21 at one end and a socketed stud 22 at its opposite end. Therefore, the registering socketed stud on the contiguous section receives a portion of the tenon stud on the engaging section, while the socketed stud on the first-mentioned section receives the tenon of the stud on the engaging section, as clearly seen in Figure 8, whereupon the sections are secured together at their meeting ends or edges.

At the meeting ends of each two contiguous or engaging side sections 20 I place battens 30, both on the inside and outside, with a bolt 31 extending through the battens and the meeting studs, thereby holding the side sections from separating or bulging. The space between the sheets of plyboard and the studs form air cells, which assists in keeping the house cool in summer and warm in winter.

A chair rail 32 is placed all around the room against the sections 20 and bolts 33 assists in tying the studs and plywood sheets together as well as holding the chair rail in position.

In the top of each section 20 is a horizontal spacer 34 which is provided with an upstanding tongue 35, Fig. 1. The horizontal plate 36 rests on top of the section 20, with the tongue 35 of each horizontal spacer 34 extending into the socket 37.

Referring particularly to Figures 9 and 10: In the socket 37 of the horizontal plate 36 are placed angle plates 38. Each plate 38 extends across the top of the tenoned and socketed-engaging studs, with the bent-down end 39 (Fig. 10) engaging the outer face of stud 22. A screw 40 extends through angle plate 38 and into the horizontal spacer 34. It is to be understood that the upper end or edges of studs 21 and 22 as well as angle plate 38 extends into the socket 37 of the horizontal plate 36.

Referring particularly to Figure 7: At each corner of the house is a corner post or upright 41. This post 41 is provided with a socket 42 and with a tenon 43. Tenon 43 fits into the socket of the stud 22 whereas socket 42 receives the tenon on the abutting stud of the section 20. The outer plyboard sheets of the two sections engaging posts 41 overlap portions of the post and these overlapping ends are suitably fastened to the posts.

The roof structure comprises the horizontal ceiling joist 44 and the roof rafters 45. The lower end of each roof rafter 45 rests upon the plate 36. At this resting end of the roof rafter there is formed an elongated slot 46 (Fig. 1), which has at its inner end socket 47; socket 47 extends longitudinally of the roof rafter 45. Each roof rafter 45 has a ceiling joist 44 in engagement therewith (Fig. 4); a bolt 48 extends through the ceiling joist and roof rafter for assisting in securing the same together, against lateral displacement. To tie the ceiling joist 44 at its outer end to the outer end of the engaged roof rafter I employ a novel roof rafter anchor device 49, Fig. 11. This anchor device comprises a flat body 50 with a right-angled flange 51 at its inner end; on its outer end is a hook-like flange 52. Flange 52 fits into elongated slot 46, with the upper end seated in the socket 47 (Figures 1 and 5). The flange 51 is embedded in the lower edge of ceiling joist 44, whereby an excellent tying action is accomplished. An angle plate 53 (Fig. 4) is placed against the ceiling joist 44 and the horizontal plate 36, and fastening means 54 secures the plate in position upon the ceiling joist and horizontal plate 36, whereby the roof rafter, ceiling joist and plate are secured together.

Sections 55 of the roof are placed upon the rafters 45 and their meeting edges are held together by a joint closure 56 as clearly shown in Figure 6. This joint closure 56 is preferably made of suitable material to permit of fillers 57 to be placed therein, which fillers 57 are part of the roof sections 55.

At the upper meeting ends of the roof rafters 45 a ridge pole 58 is placed. Each two roof rafters 45 are fastened together by a strap plate 59 which is suitably bolted to the rafters as shown in Figure 1. Battens or roof strips 60 are laid on the roof sections 55 against the ridge pole 58. A metal cap 61 is over the battens 60 and ridge pole 58, efficiently sealing the apex of the roof.

A cleat 62 is placed under the roof sections in a notch 63 on the upper edge of the roof rafter 45. A frieze board 64 is in position against the horizontal plate 36 and the roof section, efficiently sealing the house at this point. A lock 65 is employed on the roof section and the rafter for the purpose of locking the roof section in place.

The house is provided with casement window frames and double hung window frames of any desired construction (not shown). A suitable door frame construction (not shown) may be employed in finishing the house, as well as different kinds of finishing material.

From the foregoing description it will be understood that the house is of a sectional construction, including the side sections, whereby the entire units of the house can be stored in a relatively small space for transportation. The units can be easily assembled, and owing to the described manner of fastening the units or parts together, a very durable and substantial dwelling is produced. The house is securely tied or fastened to the foundation posts, and therefore, does not depend upon its weight for securing same to said posts; the posts being anchored in place, retain the house securely in position, even though it be subjected to high wind pressure.

While I have described the preferred embodiment of my invention and illustrated the same in the accompanying drawings, certain changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claims.

What I claim is:

1. In a house of the class described, the combination with a foundation post, of a sill on said foundation post, said sill comprising an outer section and an inner section, said outer section provided with an upstanding tongue, a horizontal block against the inner section of said sill, a bracket secured to said foundation post and supporting said horizontal block, said horizontal block provided with an upper bevelled face, said bevelled face extending downwardly and inwardly, a floor joist having a socket in its under edge fitting the bevelled face of said horizontal block, said floor joist provided with a dovetail fitted within the inner section of said sill, an anchor plate resting flat upon the top of said inner section, said anchor plate provided with downwardly extending flanges on its ends, one of the flanges extending between the sections of said sill, and the outer flange of said anchor plate extending into said floor joist, a side section provided with a horizontal spacing strip, said

spacing strip provided with a socket, said tongue of the outer section of the sill fitting said socket, and a roof structure on said side section.

2. In a house of the class described, the combination of a horizontal plate, a ceiling joist and a roof rafter resting on said plate, said roof rafter provided with a slot and a socket, and an anchor device extending into said slot and socket and having a portion embedded in said ceiling joist.

3. In a house of the class described, the combination of a horizontal plate, a ceiling joist and a roof rafter resting at one and the same ends upon said plate, said roof rafter being provided with an elongated slot and a socket extending from said slot longitudinally of said roof rafter, an anchor device provided with a flat body resting upon said horizontal plate, said body having at one end a hook-like flange within said elongated slot, a portion of said hook-like flange in said socket of the slot, and said anchor device having an upstanding flange on its outer end embedded in the lower portion of said ceiling joist.

4. In a house of the class described, the combination of side sections, a horizontal plate on said side sections, said horizontal plate provided with a longitudinally-extending socket, said side sections provided with means extending into said socket, an angle-plate within said socket and over the contiguous ends of the side sections, said plate provided with an end extending down against a portion of the side section, and a roof structure resting on said horizontal plate.

5. In a house of the class described, the combination with a foundation unit, of a sill on said foundation unit, a horizontal block against said sill, a bracket secured to said foundation unit and supporting said horizontal block, said horizontal block provided with an upper bevelled face, a floor joist having a socket in its under edge fitting the bevelled face of said block, said sill being provided with a socket contiguous to said block, said floor joist being provided with a tenon, and said tenon within said socket of said sill.

6. In a house of the class described, the combination with a foundation unit, of a sill on said foundation unit, a floor joist engaging said sill, an anchor plate provided with depending flanges, said anchor plate resting partly upon said floor joist and partly upon said sill, and said anchor plate having one of its flanges extending into said sill and another of its flanges extending into said floof joist.

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