Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 1

FIG 1

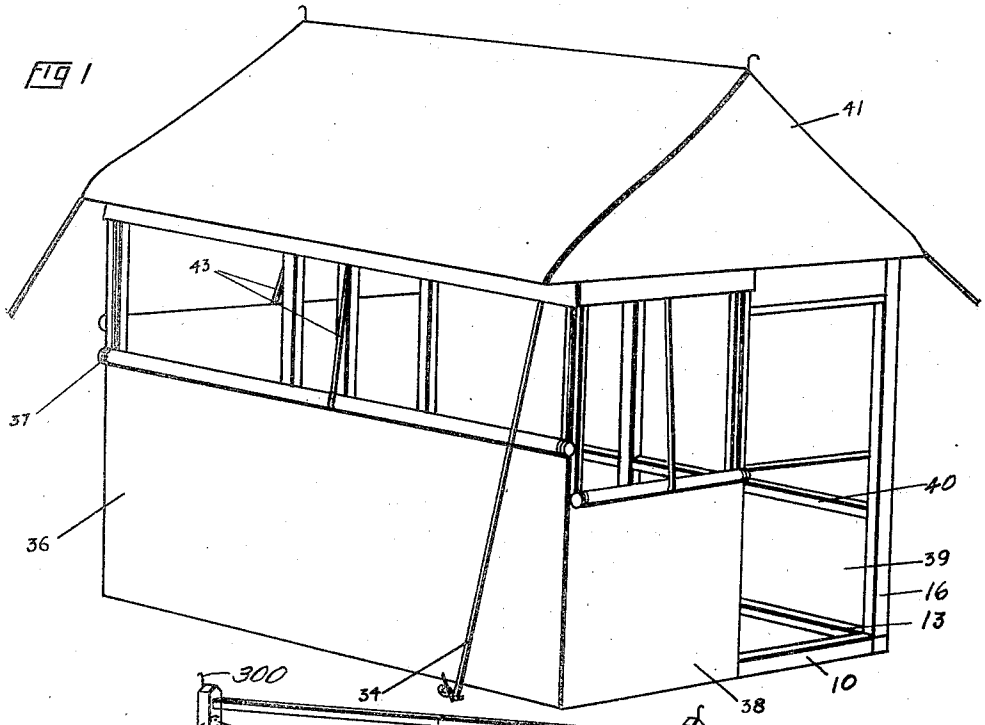
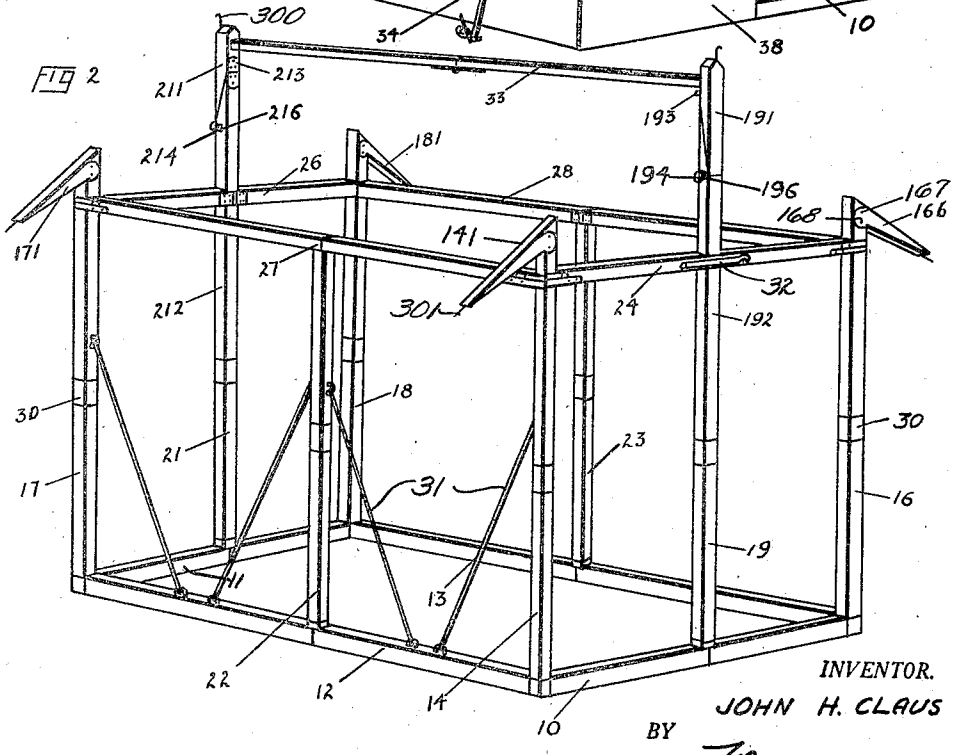


FIG 2



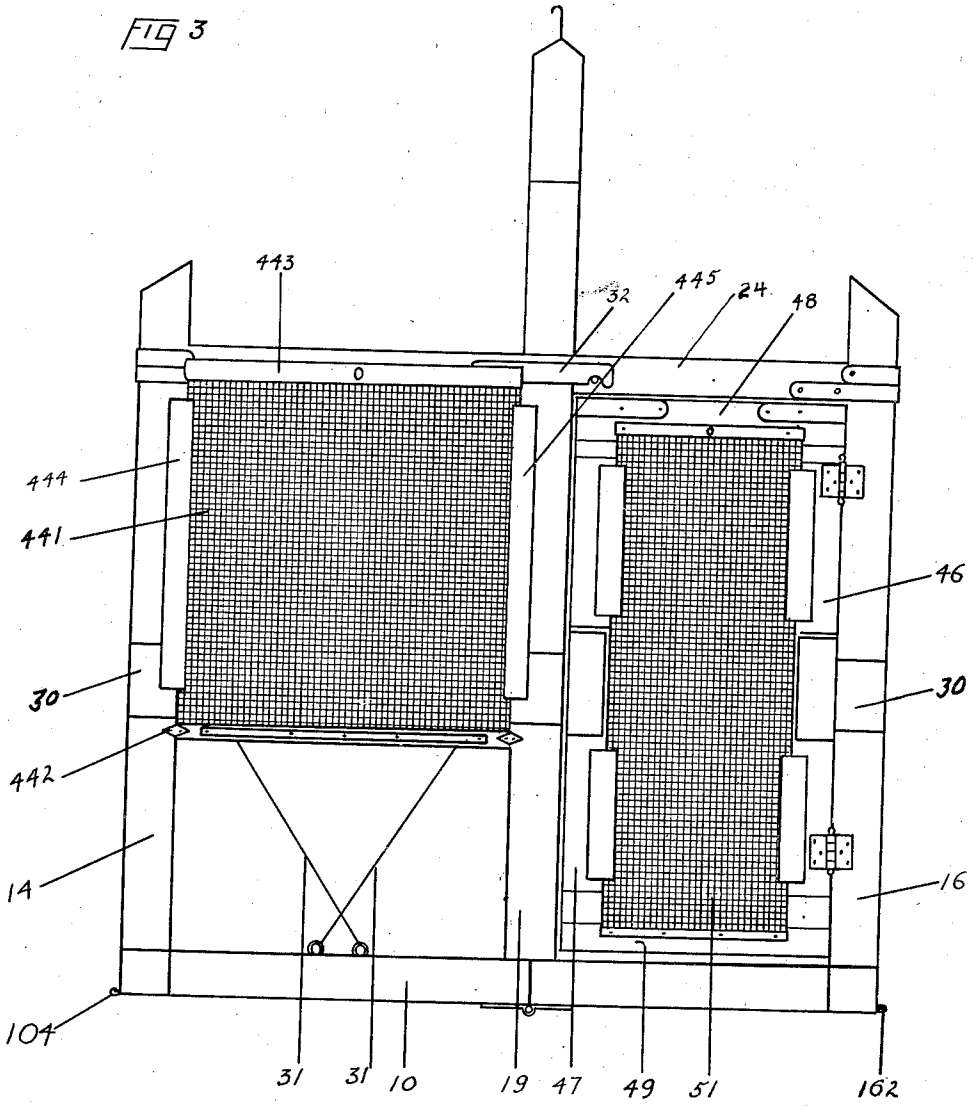
INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 2

FIG 3



INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 3

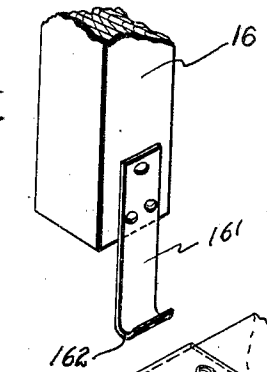


Fig. 6.

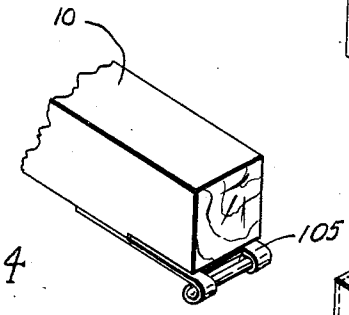


Fig 4

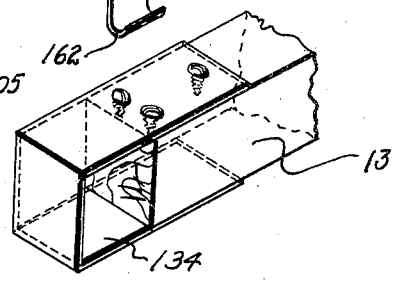


Fig. 5

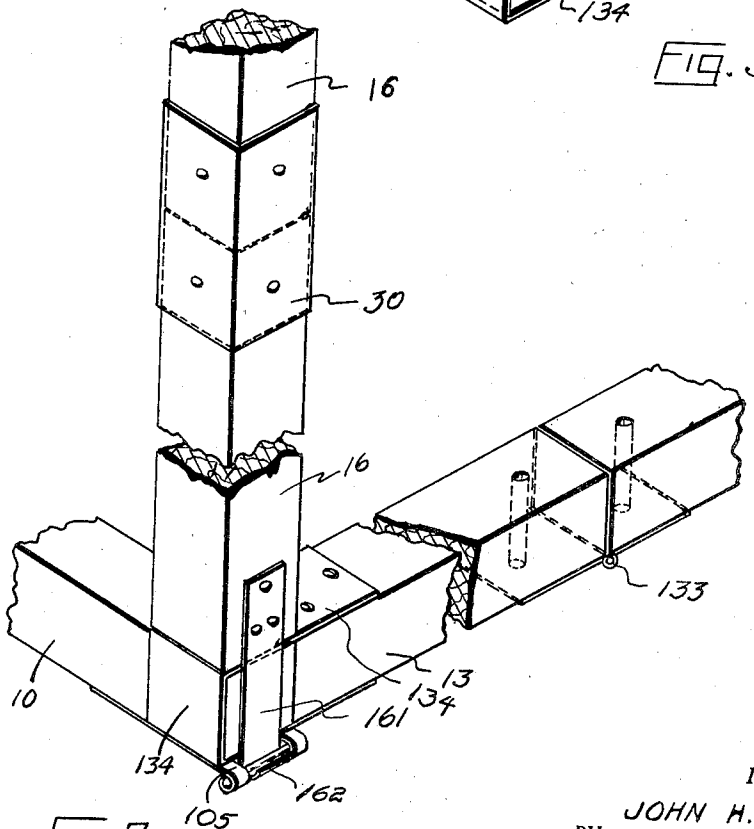


Fig 7

INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 4

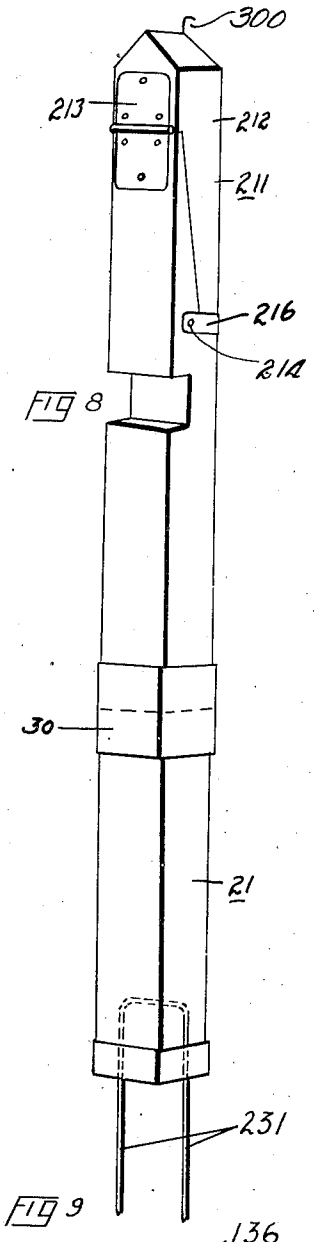


FIG 8

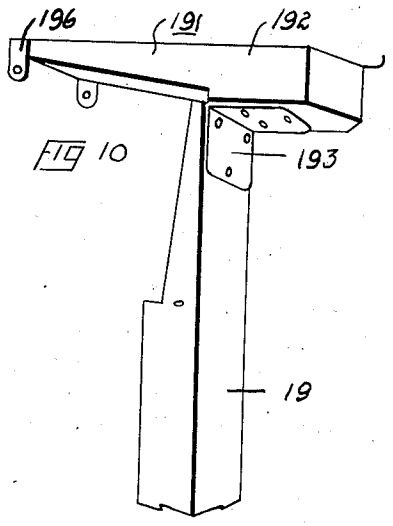


FIG 10

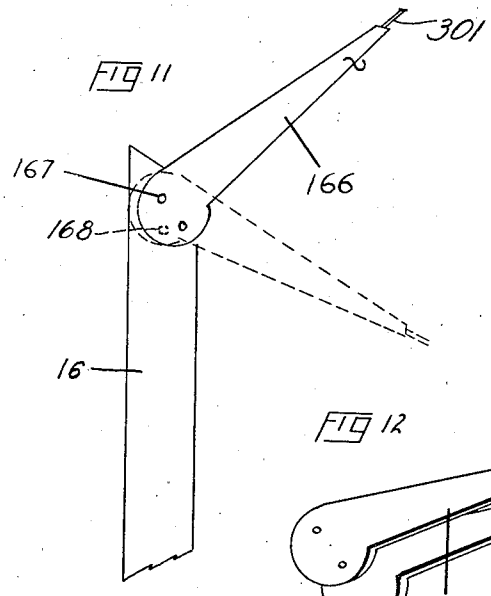


FIG 11

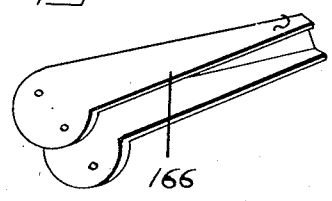


FIG 12

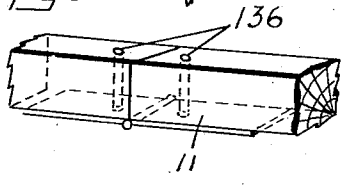


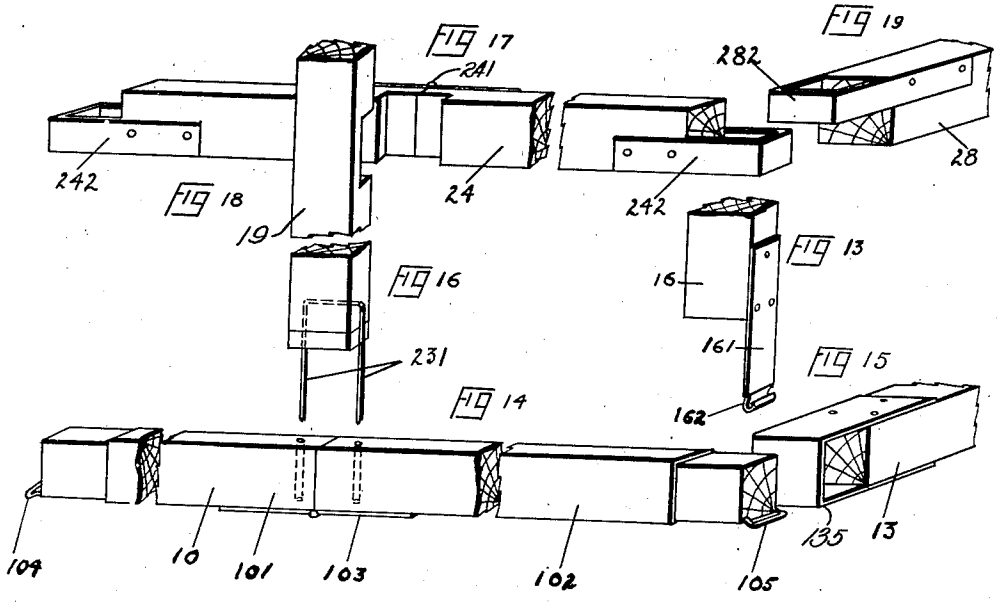
FIG 9

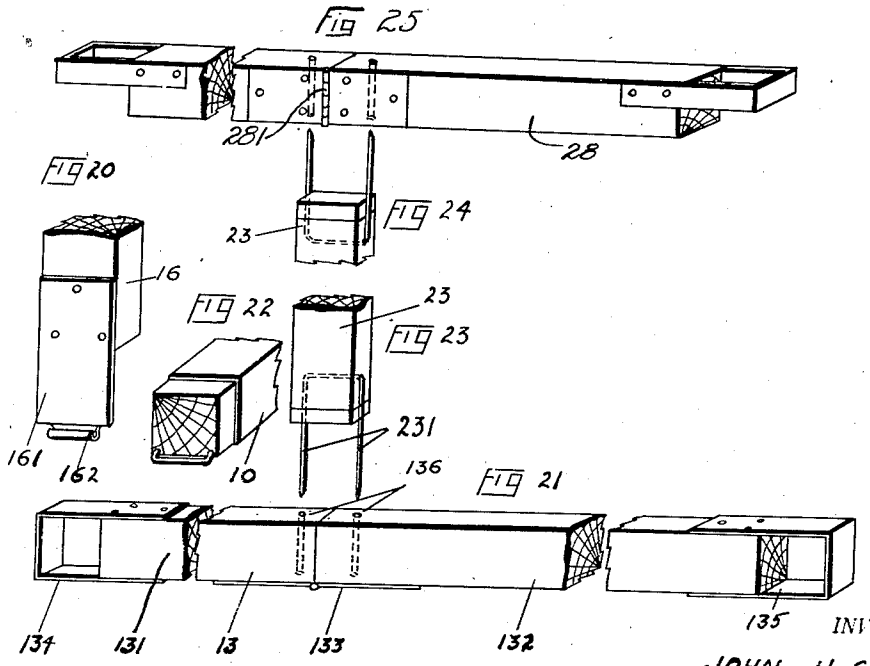
INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 5





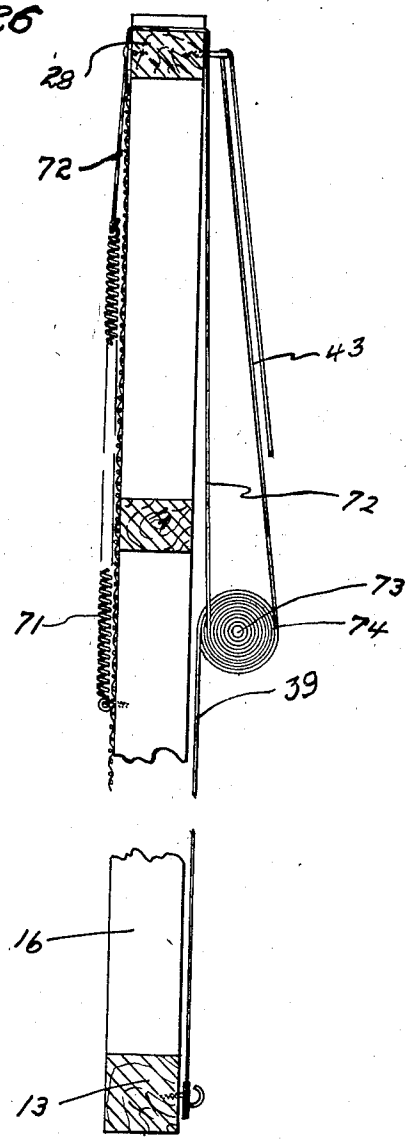
INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Jan. 20, 1948. J. H. CLAUS 2,434,685

TENT

Filed June 17, 1943 6 Sheets-Sheet 6

Fig 26



INVENTOR.
JOHN H. CLAUS
BY
Flournoy Corey
ATTORNEY

Patented Jan. 20, 1948

2,434,685

UNITED STATES PATENT OFFICE

2,434,685

TENT

John H. Claus, Lincoln, Nebr.

Application June 17, 1943, Serial No. 491,151

13 Claims. (Cl. 135—4)

1

This invention relates to portable buildings, and has particular relation to a foldable structure suitable for camp tents and the like.

One of the main objects of my invention is to provide a foldable structure in which the folded parts may be of such length as to fit readily into the storage spaces of an ordinary automobile, yet which may be unfolded to provide a relatively rigid building structure of sufficient dimensions that it may be used by adult individuals.

Another object of my invention is to provide a unique means for securing together the various parts of a frame structure.

A further object of my invention is to provide a new and novel means for stretching the roof or covering of a portable building, as for instance a tent or the like.

Other and further features and objects of the invention will be more apparent to those skilled in the art upon a consideration of the accompanying drawings and following specifications, wherein is disclosed a single exemplary embodiment of the invention, with the understanding, however, that such changes may be made therein as fall within the scope of the appended claims, without departing from the spirit of the invention.

In said drawings:

Figure 1 is a view in perspective of a camp tent or summer house constructed in accordance with one embodiment of my invention.

Figure 2 is a view in perspective of the framework of the building shown in Figure 1.

Figure 3 is a view in end elevation of the front end panel of the structure shown in Figures 1 and 2, taken from inside, and illustrating the framework of the door and window.

Figure 4 is a view in perspective illustrating one end of the front sill or foundation member of the structure shown in Figures 1, 2 and 3.

Figure 5 is a view in perspective of an adjoining end of one of the side sill members before it is engaged to the front sill.

Figure 6 is a view in perspective showing the adjoining or lower end of a corner member before it is hooked on to the end of the front sill.

Figure 7 is a view in perspective showing how a lower corner of the frame structure appears when in the engaged or erected position.

Figure 8 is a view in perspective of a center post as it appears in erected or extended position.

Figure 9 is a view in perspective of the middle portion of a front or rear sill and Figures 8 and 9 taken together illustrate how the members appear in relation to one another just before the

2

center post is engaged on the sill. The upper portion of the post is shown in extended position.

Figure 10 is a fragmentary view in perspective showing the upper portion of a center post with the upper end of the post folded down as it would appear before the canvas roof is in place.

Figure 11 is a fragmentary view in front elevation of the upper end of a corner post and one of the members which, together with the canvas cover, form the eaves of the structure.

Figure 12 is a view in perspective showing the eave forming member shown in Figure 11.

Figure 13 is a fragmentary view in perspective of the lower end of a corner post.

Figure 14 is a view in perspective of a front or rear sill member.

Figure 15 is a fragmentary view in perspective of the end of a side sill member, Figures 13, 14 and 15 being positioned to show these members as they appear just before they are joined together to form a corner of the frame structure.

Figure 16 is a fragmentary view in perspective of a front or rear center post illustrating how it may be assembled on the front or rear sill members.

Figure 17 is a view in perspective illustrating a front or rear upper frame member.

Figure 18 is a view in perspective of the upper end of a front or rear center post illustrating how it may be joined to an upper front or rear frame member.

Figure 19 is a view in perspective illustrating an end of either of the side frame members and how it appears just before it is joined to a corner post and a front or rear frame member.

Figure 20 is another fragmentary view in perspective of the corner post section of Figure 13.

Figure 21 is a view in perspective of a side sill.

Figure 22 is another fragmentary view in perspective of the end of a front or rear sill member such as shown in Figure 14.

Figure 23 is a view in perspective showing the lower end of a side center post.

Figure 24 is a fragmentary view in perspective of the upper end of the side center post shown in Figure 23.

Figure 25 is a view in perspective of a side upper frame member, the end of which is shown in Figure 19, and

Figure 26 is a fragmentary view in elevation showing a curtain and a means for holding it taut during rolling and unrolling thereof.

Referring now to the drawings; and particularly to Figures 1 and 2; a preferred embodiment of my invention is shown therein including a

base having front and rear sills 10 and 11 respectively, and left and right sills 12 and 13 respectively. In this embodiment of the invention I utilize front corner posts 14 and 16, left and right, and rear corner posts 17 and 18. I also use front center posts 19 and rear center post 21 and side center posts 22 and 23, left and right are also provided.

A rectangular upper frame is also provided consisting of front upper frame 24, rear upper frame 26, left upper frame 27, and right upper frame 28. All of these members are foldable and in the present embodiment of the invention the longest piece, when folded, is only 3½ feet long, so that the whole structure may be folded so as to be stowed away in an ordinary automobile. The front and rear sills 10 and 11 are substantially identical and are best illustrated at 10 in Figure 14. These sills consist of two members 101 and 102 joined by a hinge 103 normally on the bottom of the sill and having ties 104 and 105 on the opposite ends thereof projecting beyond the ends of the sill members.

The side sills 12 and 13 (Figure 21) likewise are substantially identical and consist of two members 131 and 132 joined by a hinge 133 on the under side thereof and having loops, indicated at 134 and 135, on the opposite ends of the members, of such dimensions as to slip readily over the projecting outer ends of the front and rear sills 10 and 11. Each of the sills has a pair of vertical holes therethrough, one on each side of the hinged junction of the sills' two members and as indicated at 136, for the reception of pins 231 on the lower ends of the center posts 19, 21, 22 and 23.

In erecting the framework, the end sills are unfolded with the hinges down and the side sills are slipped on over the ends of the front and rear sills to make a rectangular base structure. The corner posts are best shown in Figures 2, 6, 7, 11, 13 and 20, and these posts are provided with plates 161 projecting beyond the ends thereof and ending in hooks 162 adapted to engage the loops 104 and 105 on the ends of the front and rear sills. It is apparent that the corner posts may now be hooked onto the loops and erected to form a base structure having posts at each corner.

The corner posts and center posts are each in several sections, and these sections are provided with square cuff-like socket members 30 so that the upper portions of the posts may be rigidly joined to the lower portions. The upper ends of the front and rear center posts 19 and 21 are provided with hinged sections 191 and 211 respectively, and the joints between are cut on the diagonal with the diagonal cut sloping downwardly and outwardly. The uppermost portions 192 and 212 are hingedly connected to the upper portions of the posts by means of hinges 193 and 213. The hinged connection of these members serves two purposes. It not only permits the post to be folded into a smaller compass, but also affords means for stretching the eaves of the tent after the structure has been completed. The downwardly scarfed portion of the parts 191 and 211 affords a lever so that considerable leverage may be applied in stretching the ridge of the tent. These members are locked into place by means of pins 194 and 214 which pass through suitable brackets 196 and 216 respectively on the members 192 and 211.

The upper frame members 24, 26, 27 and 28 are in two or more sections, as indicated in Figures 17 and 25, and these sections are provided

with hinges on their inner faces at the center thereof, as indicated at 241 in Figure 17 and 281 in Figure 25. The front and rear frame members 24 and 26 are provided with loops 242 adapted to be slipped on over the upper end of the corner posts and the side frame members 27 and 28 are provided with loop members 282, also adapted to be slipped on over the corner posts. The upper ends of the corner posts are bias-cut on the same slope as the roof of the tent when it is erected. The top ends of the front and rear center posts are also cut on the same angle as the slope of the roof of the tent. The front and rear center posts are stiffened by means of a roof pole 33.

I also preferably provide an eave support member such as shown at 166 pivotally engaged in the upper end of the corner posts 16. Similar members 141, 171 and 181 are likewise pivoted to the upper ends of the corner posts 14, 17 and 18. These members are pivotally engaged to the upper ends of the corner posts by means of pins 167 and are locked in place by means of other pins, as at 168 (Fig. 11), when they are in the normal extended position, or as shown in dotted lines, Figure 11.

After erection, the various parts of the structure may be stiffened by means of wires, such as those illustrated at 31. Also the end frame members are locked in place by means of a latch-like member 32 and the center posts held in rigid position by ridge pole 33. Ropes, as at 34, may be employed for bracing the structure and the canvas sides, illustrated at 36, 37, 38 and 39 serve also in stiffening the structure as does the roof covering 41. The sides preferably are made so that they may be rolled up and down, as illustrated, by means of straps such as 43.

A unique means for holding the canvas roll at any desired position in rolling it up and down is shown in Figure 26. The lower edge of the canvas 39 is fastened to the sill 13. A coil spring 71 is fastened to the inside face of one of the members which make up the framework of the wall. A wire or cord 72 is fastened to the free end of the spring 71 and passes up over the top frame member 28 and down to a spool or reel 73 on the end of the curtain roll 74. As the curtain rolls up and down the tension of the spring 71 prevents rolling or unrolling of the curtain roll by gravity.

In Figure 3 I have illustrated one form of end for the building structure which provides a screen covering for the window opening, as illustrated generally at 441. The screen 441 may be rolled up for storage. In its extended position the screen is clamped by means of the clamping members 442 and 443. Slats at 444 and 445 also hold the screen in the extended position. The door likewise is collapsible and consists of collapsible, vertical frame members 46 and 47 and upper and lower members 48 and 49. The members 48 and 49 hook on over the ends of the vertical members 46 and 47 and the screen 51 may be rolled up and unrolled so as to be secured on the door in the same manner as the screen 441.

In erecting the tent, it is only necessary to assemble the sills, hook the corner posts onto the sills, drop the frame members over the upper members of the corner posts, put the sides on the structure, and cover it with the roof covering. The roof covering is tightened by merely folding down the hinged members 166, 191 and 211, since the hooks 300 and 301 in the several hinged members engage the roof covering 41.

Although I have described a specific embodi-

ment of my invention, it is apparent that modifications thereof may be made by those skilled in the art. Such modifications may be made without departing from the spirit and scope of my invention as set forth in the appended claims.

I claim as my invention:

1. In a portable building, a framework including sill members and frame members, certain sill members having loops adapted to engage over other sill members, and hooked members adapted to hook over the ends of the second named sill members to position frame members.

2. In a portable building of the class described, foldable members to form sills, other foldable members to form frames, jointed members for forming corner posts and center posts, and means for joining the sill members and the corner posts comprising loops on some of the members and cooperating plates and hooks on other of the members.

3. In a portable building, means for connecting frame members including a loop on one of the members adapted to engage and hold a second one of the members, the second member also having a loop on the engaged end thereof and a third member having a plate and adapted to extend over the junction of the first two named members, and a hook on the plate for engaging the loop on the second member, the members when so assembled forming a corner of a frame structure.

4. In a structure of the class described, a flexible roof covering, a center end post having the upper end thereof foldable and the foldable end having a portion extending beyond the joint whereby a leverage is provided for stretching the roof covering.

5. In a structure of the class described and including a roof, a post, and means forming eave supports for the roof of the structure comprising an eave support member pivotally engaged on the upper end of the post.

6. In a structure of the class described, a post, an eave support member pivotally engaged on the upper end of the post, and a means securing the eave support member in eave supporting position at an angle to the post.

7. In a structure of the class described, means for engaging two cross members including cooperating interengaging notches in the members and means for holding one member on the other including a hook pivotally engaged to one of the members and bearing against the other member when in the engaged position to hold it in place.

8. In a portable building of the type having a flexible roof covering, a framework including horizontal sill members and vertical frame members, interengaging means on the ends of the sill members and means on certain of said frame members for holding said interengaging means in interengagement so long as said vertical frame members are in generally vertical position, at least certain of said horizontal sill members being foldable, means on certain of said vertical frame members for maintaining the foldable sill members in extended relation, an upper framework receiving the upper portions of said vertical frame members and serving to hold them in vertical position, thereby cooperating with the vertical frame members in holding the interengaging means for said horizontal sill members in position, said upper framework also including foldable members and means on certain of said vertical members for holding the foldable members of said upper framework in extended relation, means on the ends of the foldable members of said upper framework for embracing the corner members of said vertical frame members generally below their upper ends, and hinged roof receiving elements at the upper ends of said vertical frame members, unfolding of the latter facilitating assembly of the said embracing means of the upper framework with the upper ends of said corner members of the vertical frame members, certain of said roof receiving elements being swingable laterally outwardly to form eave supports for said flexible roof covering and others of said hinged roof receiving elements being movable to stretch said flexible roof covering.

9. In a portable building, a framework including horizontal sill members and vertical frame members, interengaging means on the ends of the sill members and means on certain of said frame members engageable with certain of said engaged members for holding said interengaging means in interengagement so long as said vertical frame members are in generally vertical position, at least certain of said horizontal sill members being foldable, and means on certain of said vertical frame members for maintaining the foldable sill members in extended relation.

10. In a portable building, a framework including horizontal sill members and vertical frame members, interengaging means on the ends of the sill members and means on certain of the frame members engageable with certain of said engaged members for holding said interengaging means in interengagement so long as said vertical frame members are in generally vertical position, at least certain of said horizontal sill members being foldable, means on certain of said vertical frame members for maintaining the foldable sill members in extended position, an upper framework receiving the upper portions of said vertical frame members and serving to hold them in vertical position, said upper framework also including foldable members and means on certain of said vertical members for holding the foldable members of said upper framework in extended relation, and means on the ends of the foldable members of the upper framework for embracing the corner members of said vertical frame members.

11. In a portable building, a pair of generally horizontal members adapted to be assembled with one end of one member next to the adjacent end of the other member, a loop on each of said ends, the first of said loops being shaped to overlap the other of said loops, and a vertical member adapted to engage the outer end of the said other loop and lock said other loop in interengagement with the first of said loops.

12. In a structure of the class described, a framework consisting of socketed members and foldable members, loops on some of the members for joining same to other members, other loops on said other members, and plates on other of the members having hooks on the ends thereof for engaging the said other loops to form a three piece corner structure.

13. In a portable building, a framework including horizontal sill members and vertical frame members, interengaging means on the ends of the sill members and means on certain of the frame members engageable with certain of said engaged members for holding said interengaging means in interengagement so long as said vertical frame members are in generally vertical position, at least certain of said horizontal sill members being foldable, means on certain of said vertical

frame members for maintaining the foldable sill members in extended position, the said upper framework including foldable members, and means on certain of said vertical members for holding the folding members of said upper framework in extended relation.

JOHN H. CLAUS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
633,054	Tanner	Sept. 12, 1899
797,474	Walker	Aug. 15, 1905
958,276	Pence	May 17, 1910
1,136,992	Averitt	Apr. 27, 1915
1,245,045	Scott	Oct. 30, 1917
1,491,849	Dickey	Apr. 29, 1924
1,517,092	Nantz	Nov. 25, 1924
1,564,032	Struckert	Dec. 1, 1925
1,750,213	Collins	Mar. 11, 1930
1,786,084	Phinn	Dec. 23, 1930
1,801,014	Lange	Apr. 14, 1931
1,830,702	Johnson	Nov. 3, 1931
2,133,204	Max	Oct. 11, 1938
2,284,686	Rupright	June 2, 1942