June 16, 1959 F. E. BIGELOW 2,890,498

PORTABLE BUILDING

Filed Nov. 18, 1955 3 Sheets-Sheet 1

Fig. 1

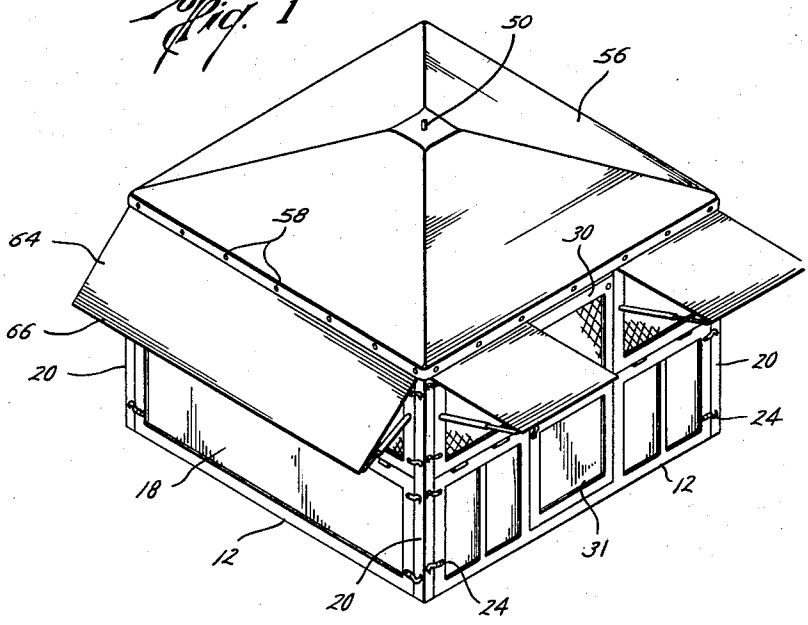
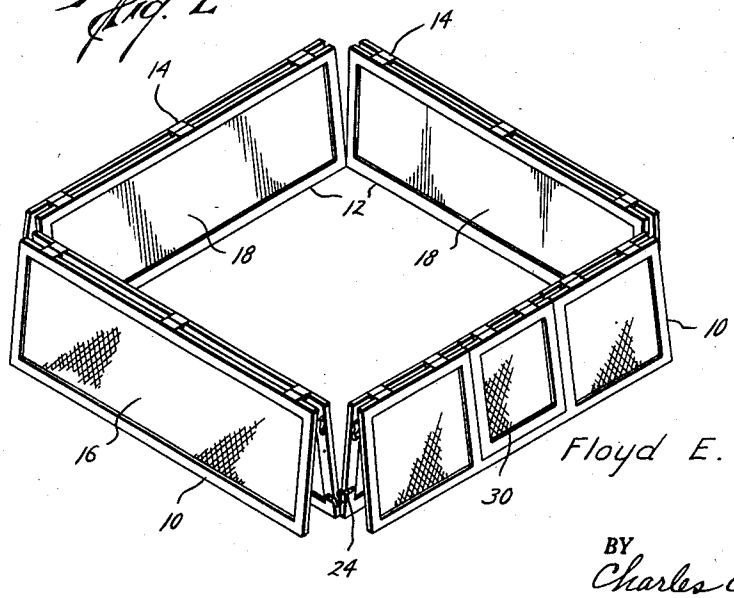


Fig. 2



Floyd E. Bigelow
INVENTOR.

BY
Charles E. Lightfoot
ATTORNEY

June 16, 1959 F. E. BIGELOW 2,890,498

PORTABLE BUILDING

Filed Nov. 18, 1955 3 Sheets-Sheet 2

Fig. 3

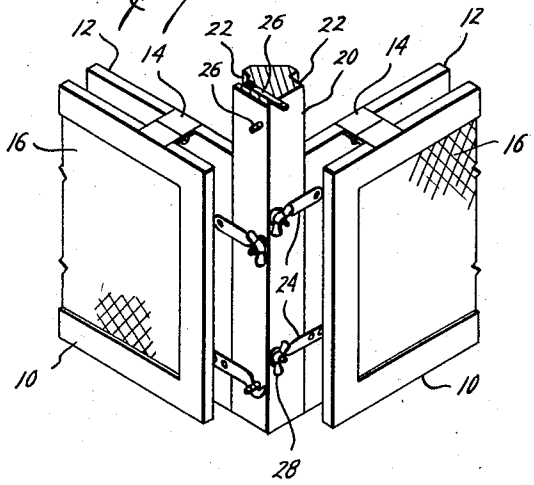
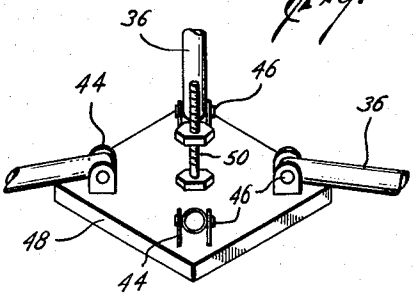


Fig. 4



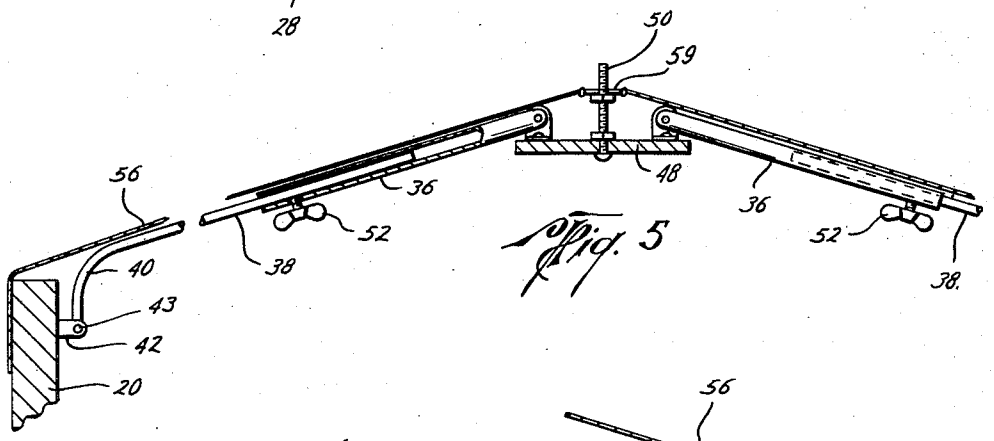


Fig. 5

Fig. 6

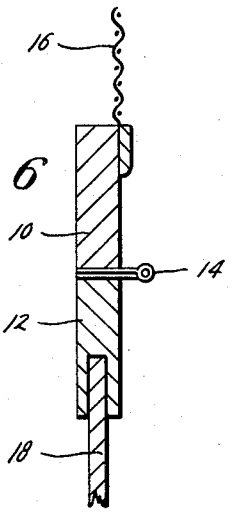
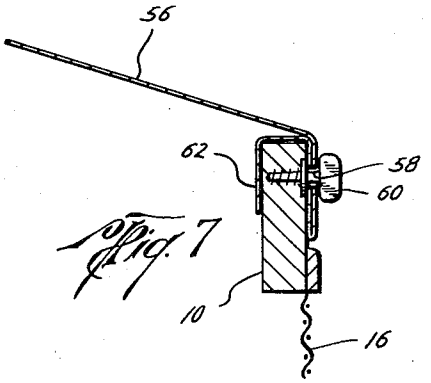


Fig. 7



Floyd E. Bigelow
INVENTOR.

BY Charles E. Lightfoot
ATTORNEY

June 16, 1959 F. E. BIGELOW 2,890,498

PORTABLE BUILDING

Filed Nov. 18, 1955 3 Sheets-Sheet 3

Fig. 8

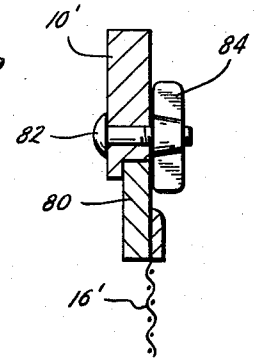
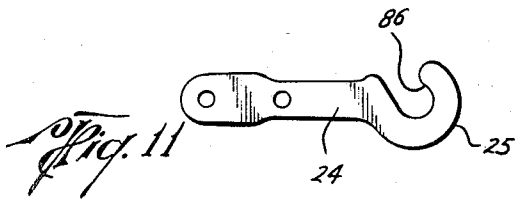


Fig. 9

Fig. 10

Fig. 11



Floyd E. Bigelow
INVENTOR.

BY Charles E. Lightfoot
ATTORNEY

United States Patent Office

2,890,498

Patented June 16, 1959

2,890,498

PORTABLE BUILDING

Floyd E. Bigelow, Houston, Tex.

Application November 18, 1955, Serial No. 547,683

3 Claims. (Cl. 20—2)

This invention relates to a portable building, and more particularly to a house or cabin structure made up of separate parts which may be easily assembled and disassembled and which when disassembled may be formed into a compact assemblage for convenient storage or transportation.

The invention has for an important object the provision of a portable house or cabin embodying foldable side units and separate corner post units, adapted to be fitted together and having means for releasably securing the same in assembled relation.

Another object of the invention is to provide a portable house made up of side units and corner posts adapted to be releasably connected together and which are shaped for interfitting engagement to form a strong, rigidly braced, structure when fitted together.

A further object of the invention is the provision of a portable house having a collapsible roof structure embodying a covering of flexible material and adjustable supporting means therefor which are adjustable to securely hold the covering in a tightly stretched condition.

Another object of the invention is to provide a portable structure of the kind referred to having foldable sides of uniform dimensions, one of which sides includes a door which is foldable therewith and which is also hinged for opening and closing in the usual manner when the structure is assembled.

A further object of the invention is the provision in a portable house of folding sides therefor having window openings and including closure members for the openings and also having means for supporting the closures in positions to serve as awnings for the windows.

The above and other important objects and advantages of the invention may best be understood from the following detailed description constituting a specification of the same, when considered in conjunction with the annexed drawings, wherein—

Figure 1 is a perspective view of the invention in fully assembled condition;

Figure 2 is a perspective view showing the side units of the invention in folded condition in a preliminary stage of the assembling of the structure and arranged to be unfolded;

Figure 3 is a fragmentary perspective view, on a somewhat enlarged scale showing a portion of one corner of the structure of the invention and illustrating the manner in which the corner posts are assembled with the side units and secured thereto preliminary to unfolding the side units;

Figure 4 is a fragmentary perspective view, on an enlarged scale showing structural details of a portion of the supporting structure of the roof of the invention;

Figure 5 is a fragmentary vertical, central, cross-sectional view, on an enlarged scale of the roof structure of the invention;

Figure 6 is a fragmentary vertical, cross-sectional view on an enlarged scale showing details of construction of a medial portion of one of the folding sides;

Figure 7 is a fragmentary, vertical, cross-sectional view, on an enlarged scale, showing details of construction of an upper portion of one of the sides and the manner in which the roof is secured thereto;

Figure 8 is a view similar to that of Figure 7, illustrating a somewhat modified form of the invention and showing details of construction of a removable window screen of the same;

Figure 9 is a fargmentary, side-elevational view, on an enlarged scale showing details of structure of a window closure and awning of the invention and the supporting means therefor;

Figure 10 is a fragmentary, horizontal, cross-sectional view, showing details of structure of a side unit of the invention having a door incorporated therein; and

Figure 11 is a side elevational view, on an enlarged scale, illustrating a latching element of the invention.

Referring now to the drawings in greater detail, the invention is illustrated herein in connection with a building structure of generally rectangular figuration, having folding sides and corner posts, which are adapted to be assembled and secured together to form a rectangular enclosure, upon which a collapsible roof is removably supported, it being understood that the invention is applicable to houses of other configurations, and is not to be limited to the particular construction and arrangement illustrated herein. Each of the side walls is formed of upper and lower sections or panels, **10** and **12**, respectively, hingedly connected together along adjacent horizontal edges, having suitable hinges, such as those indicated at **14**, whereby the upper sections may be folded down upon the lower sections.

Each of the sections comprises a rectangular frame, of wood, or other suitable material, and the upper sections **10** may be covered with suitable screen **16**, while the lower sections may be of solid sheet material **18**.

For the purpose of assembling the sections into a rectangular enclosure, corner posts **20** are provided, each of which is formed with a longitudinal groove **22** along one edge of each of its outer faces, whose depth is preferably the same as the thickness of the frame portions of the sections or panels, and into which the ends of the sections may be fitted in assembling the structure. Latching elements **24**, of hook shape, are attached to each section, in position to extend beyond the ends of the sections in overlying relation to the outer faces of the corner posts, and the corner posts have bolts **26** extending outwardly from their outer faces, in position to be received in the hook portions of the latching elements, and are provided with wing nuts **28**, whereby the sections are removably secured to the corner posts.

One of the side walls has a central door formed with upper and lower hingedly connected sections **30** and **31**, folding with the sections of the side wall, and which is also hingedly connected thereto, as indicated at **32** in Figure 10, to be opened and closed when the structure is in assembled condition, the upper door section **30** being screened, while the lower door section is closed by solid sheet material.

It will be apparent that the side walls may be folded in the manner illustrated in Figure 2, and may then be formed into a compact bundle with the corner posts and the collapsible roof, to be more fully described hereinafter, for the purpose of convenient storage and transportation.

The collapsible roof of the invention comprises roof supporting members made up of telescopingly arranged inner and outer elements **36** and **38**, respectively, said outer elements **38** taking the form of rods, whose outer

ends are bent downwardly, as indicated at **40**, and are perforated, for pivotal attachment to perforated brackets **42**, as by means of pins **43**, whereby said outer elements may be folded downwardly to lie along the corner posts, and may be moved to upper positions extending inwardly from the corner posts for insertion into inner elements **36**, to place the roof supporting members in position to support the roof. The inner elements **36** are of tubular shape, and are pivotally attached at their inner ends to perforated brackets **44**, as by means of pins **46**, the brackets **44** being secured to the upper side of a central plate **48**, whereby the inner elements may be folded into parallel relation, or may be moved to extended positions to receive the inner ends of the outer elements, when the roof is assembled. The center plate **48** also has a centrally positioned upwardly extending bolt **50** for a purpose hereinafter pointed out. The inner elements **36** are also provided with set screws **52**, by which the inner and outer elements are adjustably secured together.

It will be apparent that with the side walls and corner posts assembled, the outer elements **38** may be swung upwardly and inserted in the inner elements **36**, the center plate **48** being then moved to a central position between the walls, and the set screws **52** tightened, whereby the roof supports may be securely held in position to support the roof.

A roof cover **56**, of generally rectangular configuration is supported on the roof supports, the cover having a central opening **59**, through which the bolt **50** of the center plate **48** extends, and the marginal portions of the cover extending downwardly over the upper edges of the walls.

The marginal portions of the cover may be provided with spaced openings **58**, through which turn buttons **60** secured to the upper margins of the walls may be extended, to removably attach the cover to the walls. The marginal portions of the cover may, if desired, be turned inwardly over the upper edges of the walls, as seen at **62** in Figures 7 and 9. When thus assembled the roof is of pyramid shape.

The upper screen sections **10** of the walls form window openings, which may be provided with closure members **64**, which also serve as awnings, the same being preferably formed of flexible fabric such as canvas, or the like, having marginal openings along their inner margins, corresponding to the openings **58** of the roof cover, and through which the turn buttons **60** may be extended, to attach the closures to the walls. The inner marginal portions of the closures are preferably positioned beneath the outer margins of the roof cover, as indicated at **65**, in Figure 9, to provide water shedding arrangement. The outer margins of the closures may be formed with hems, indicated at **66**, through which U-shaped rods **68** are extended, whose side arms are received in tubular elements **70**, pivotally connected to brackets **72** carried by the walls, below the upper edges of the walls. The tubular elements **70** are provided with set screws **74**, by which the arms of the rods **68** may be adjustably secured thereto, whereby the position of the closures may be adjusted as desired. Each of the closures may have one or more chains **76**, or similar tension elements, shown in Figure 9, connected at their outer ends to the rods **68**, and at their inner ends to the walls, above the screens **16**, to prevent stretching of the fabric of the closure.

By this construction, it will be evident that the closures may be raised or lowered, as desired, by suitably adjusting the rods **68**, in the elements **70**, whereby the closures may serve as awnings, or may be moved to positions to close the window openings.

As best illustrated in Figure 3, the upper and lower sections of the side walls are attached to the hinges **14**, in a manner such that the sections will be somewhat spaced apart when in folded condition, so that space is provided between the sections for the accommodation of the closures **74** with their supporting elements, whereby these parts will be enclosed between the sections and protected thereby when the structure is folded into a stack or bundle.

A somewhat modified form of the invention is illustrated in Figure 8, wherein the screen **16'** of the upper wall section **10'** is provided with a frame **80**, which is removably attached to the section, as by means of bolts **82**, provided with wing nuts **84**.

One of the latch elements **24** of the invention is illustrated in detail in Figure 11, this element having a hook portion **25** formed with a bill, whose throat **86** is somewhat narrowed, whereby the latch elements may be snapped into position over the bolts **26**, to hold the sections in contact with the corner posts, for convenience in assembling the structure.

To assemble the structure, the folded side walls may be placed in positions to form a rectangle as illustrated in Figure 2, the upper sections being swung outwardly away from the lower sections **12**, to act as props to hold the lower sections upright. The corner posts may then be placed in position at each corner, the latch elements **24** being hooked over the bolts **26** to secure the lower sections to the posts. When the corner posts are thus connected to the wall sections the bolts **26** are prevented from slipping out of the hooks **25**, due to the restricted throats **86** of the hooks.

With the sides and corner posts thus connected the upper sections **10** may then be swung upwardly into engagement with the posts and secured thereto, to complete the walls.

The elements **38** of the roof supports are then swung upwardly and inserted into the elements **36**, to assemble the roof supports. By suitably adjusting the elements **36** and **38** and tightening the set screws **52** the center plate may be supported in a central position above the walls with the roof supports extending radially outwardly to the corner posts.

The roof cover **56** may then be placed in position in the manner previously described to complete the structure.

It will thus be seen, that the invention, constructed as described above provides a portable building which is easily assembled and disassembled and whose parts may be readily stacked and folded into a compact unit for convenient storage or transportation.

The invention has been disclosed herein in connection with a certain specific embodiment of the same, but it will be understood that this is intended by way of illustration only, and that numerous changes can be made in construction and arrangement of the various parts without departing from the spirit of the invention or the scope of the appended claims.

Having thus clearly shown and described the invention, what is claimed as new and desired to secure by Letters Patent is:

1. In a portable building the combination with side walls arranged with adjacent ends in parallel relation, posts positioned between and connected to the adjacent ends of the side walls, of a roof structure including a roof support on each of said posts, each of said supports comprising inner and outer telescopingly arranged parts movable longitudinally relative to each other, means pivotally connecting the outer part to the post, a center plate, means pivotally connecting each of the inner parts to the center plate with the supports extending inwardly from the corner posts, means for releasably holding the parts against relative longitudinal movement to support the center plate in a central position between the walls, a roof cover carried on the supports, and means forming a connection between said center plate and the center of said roof cover.

2. A portable building comprising vertically foldable side walls positioned to form a rectangular enclosure, corner posts of rectangular shape in cross-section positioned vertically between adjacent ends of the walls,

means for connecting the walls to the posts, a roof support connected to each post and extending inwardly at the corners of the enclosure, each of said supports including inner and outer telescopingly arranged parts movable longitudinally relative to each other, means connecting each outer part to a post for vertical swinging movement relative to the post, a center plate, means connecting each of the inner parts to the plate with the supports extending inwardly from the corner posts, means for releasably connecting the parts to hold the parts against relative longitudinal movement to support the center plate in a central position between and above the upper edges of the walls, a roof cover on the supports, and means forming a connection between said center plate and the center of said roof cover.

3. In a portable building the combination with side walls arranged with adjacent ends in parallel relation, posts positioned between and connected to the adjacent ends of the side walls and a roof cover extending between and connected to the upper edge portions of said walls, of roof supporting members on each of the posts each comprising inner and outer telescopingly arranged parts movable longitudinally relative to each other, means

forming a pivotal connection between each of the outer parts and one of the posts, a center plate, means forming a pivotal connection between each of the inner parts and the center plate with the members extending inwardly from the corner posts, means forming a connection between said center plate and the center of said roof cover, and means for releasably holding the parts against relative longitudinal movement to support the center plate in a central, elevated position between the walls.

References Cited in the file of this patent

UNITED STATES PATENTS

459,764	Orr	Sept. 22, 1891
490,205	Lauber	Jan. 17, 1893
1,250,415	Aylwin	Dec. 18, 1917
2,225,426	Aronson	Dec. 17, 1940
2,291,900	Jimmes	Aug. 4, 1942
2,293,569	Sonino	Aug. 18, 1942
2,725,602	Francis	Dec. 6, 1955

FOREIGN PATENTS

52,841	Switzerland	Aug. 8, 1911