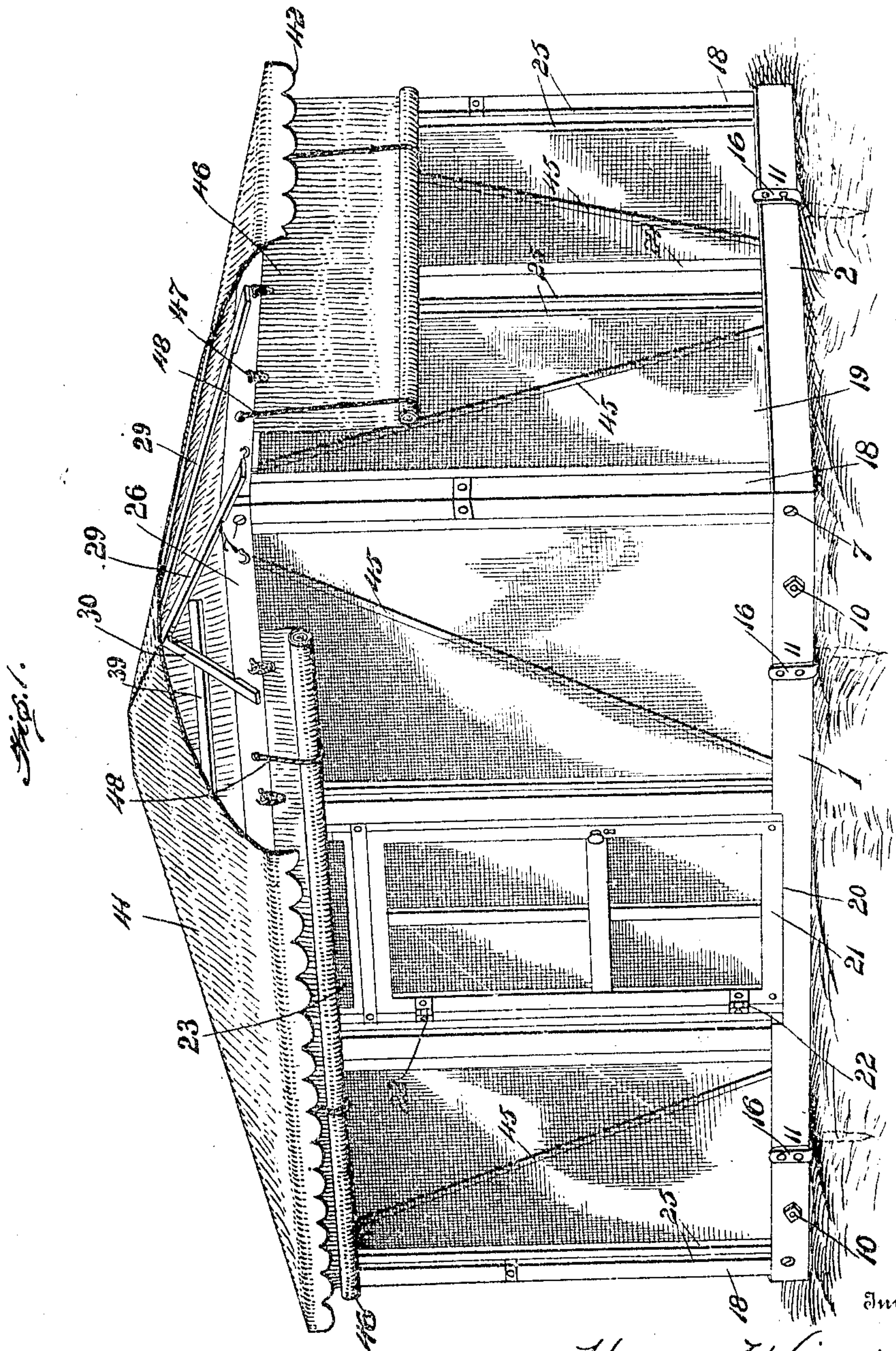


No. 849,709

PATENTED APR. 9, 1907.

H. WINGREN.
PORTABLE SCREEN HOUSE.
APPLICATION FILED SEPT. 4, 1906.

4 SHEETS—SHEET 1.



Inventor

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Witnesses

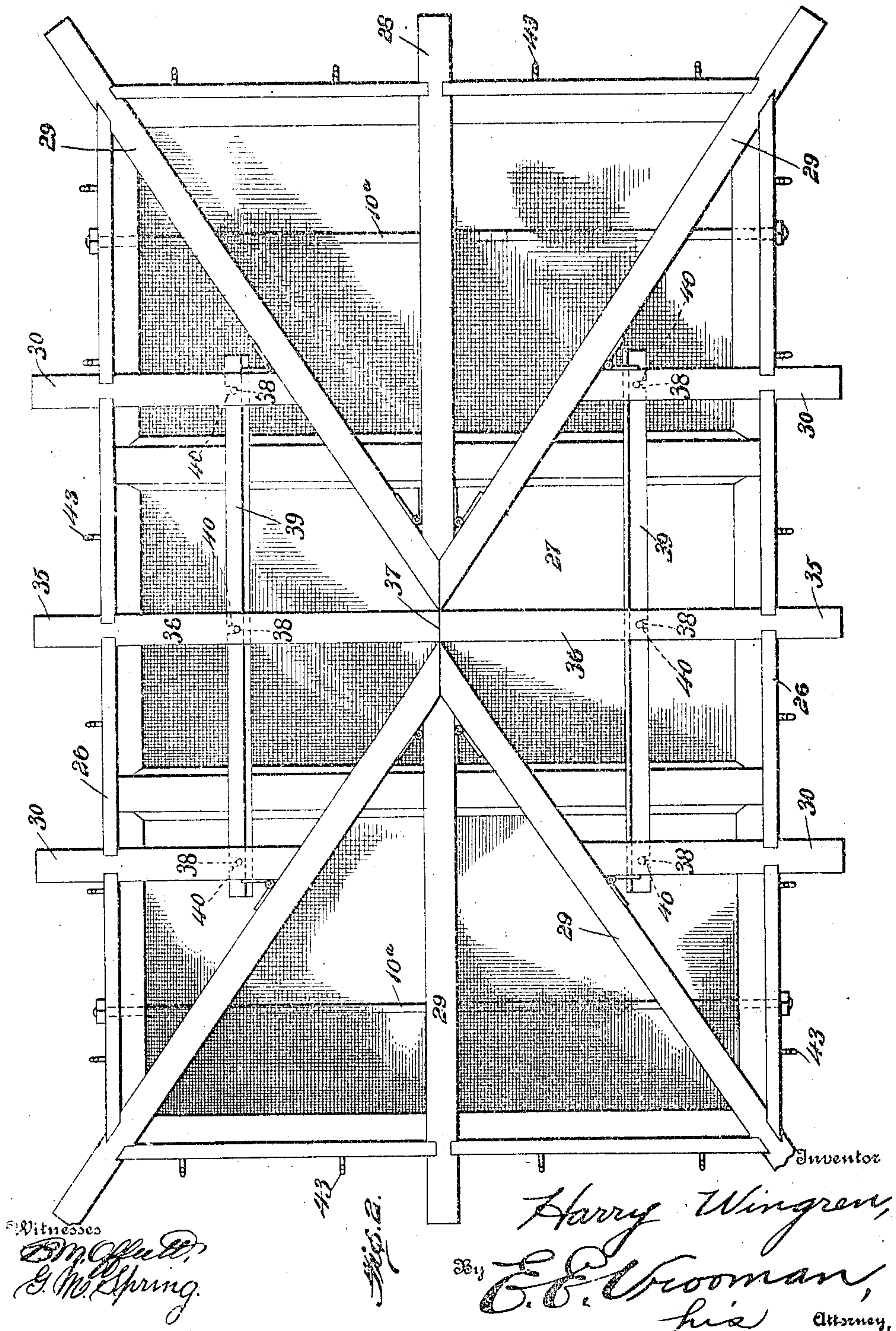
Wm. C. Lutz,
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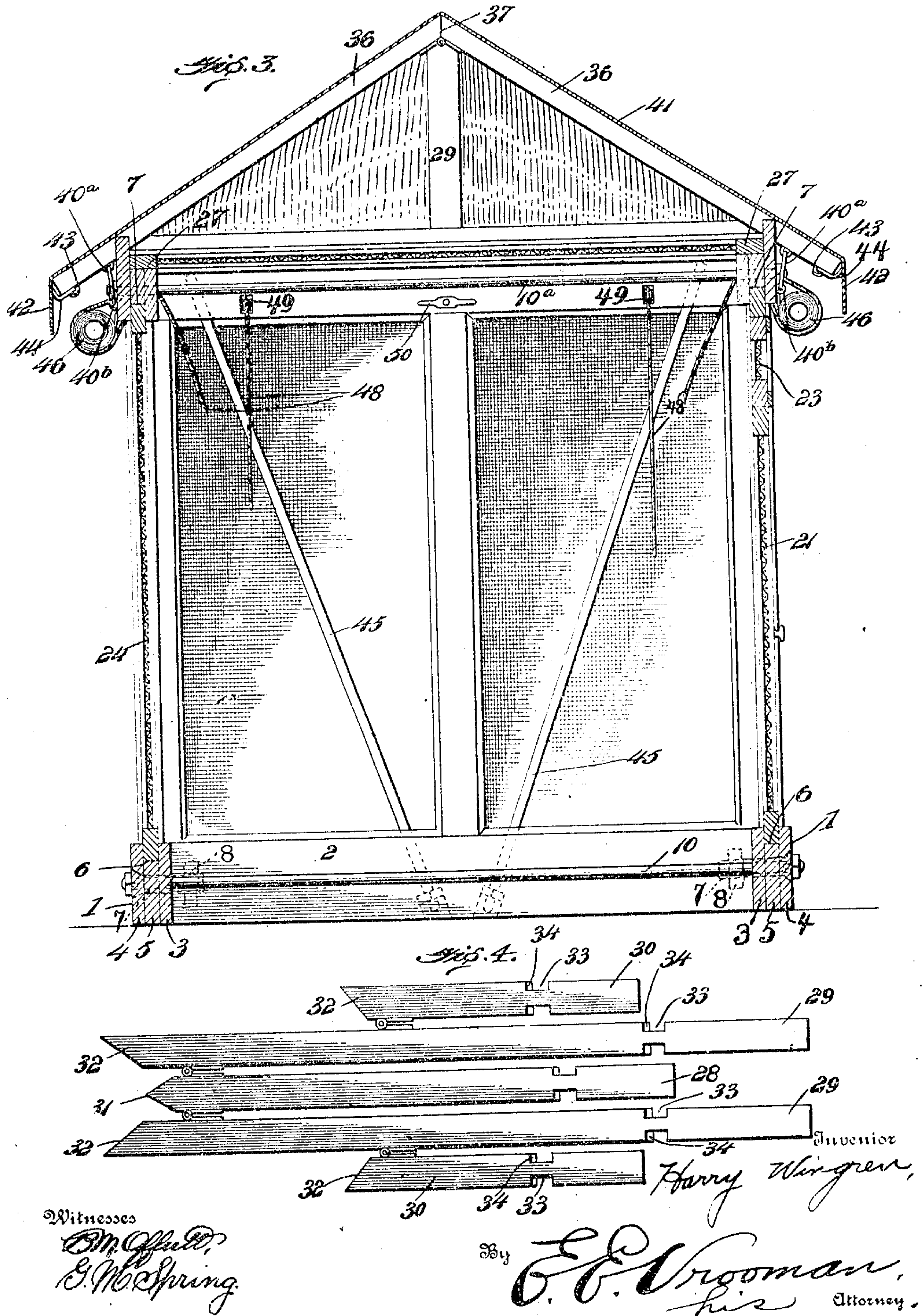


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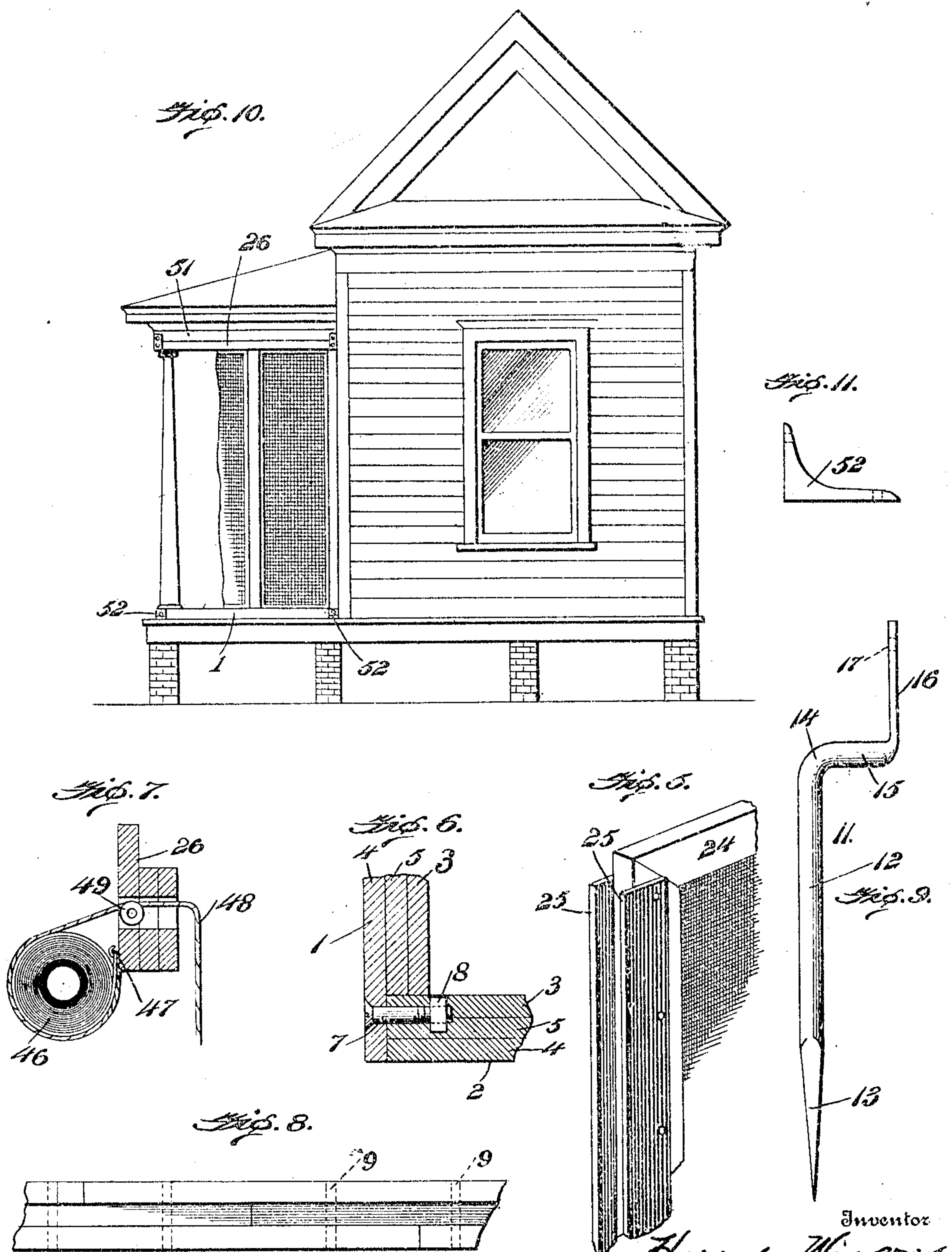


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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

HARRY WINGREN, OF GENOA, TEXAS.

PORTABLE SCREEN-HOUSE.

No. 849,709.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed September 4, 1906. Serial No. 333,147.

To all whom it may concern:

Be it known that I, HARRY WINGREN, a citizen of the United States, residing at Genoa, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Portable Screen-Houses, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in summer-houses, and particularly to a portable screen-house.

The object of the invention is the improvement of a portable screen-house, which house can be easily disassembled for shipment or assembled after transportation.

Another object of the invention is the construction of a portable house which is composed of a minimum number of parts, and therefore comparatively cheap to construct and yet is very strong and durable.

With these and other objects in view the invention consists of certain other 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 claims hereto appended.

In the drawings, Figure 1 is a perspective view of a house constructed in accordance with the present invention. Fig. 2 is a top plan view of the house depicted in Fig. 1 with the roof-canvas removed. Fig. 3 is a transverse vertical sectional view of the house depicted in Fig. 1. Fig. 4 is a top plan view of one of the roof-sections in a folded position. Fig. 5 is a fragmentary perspective view of one of the screen-panels. Fig. 6 is a horizontal fragmentary sectional view of the adjoining ends of two of the sills and showing the manner of securing the same together. Fig. 7 is a fragmentary view of one of the horizontal roof-girders, showing the manner of threading the cords or ropes therethrough, which cords control the winding of the side curtains. Fig. 8 is a fragmentary top plan view of a sectional sill. Fig. 9 is a view in side elevation of one of the ground-anchors for the portable house. Fig. 10 is a view in side elevation of a house and a porch, showing the panels constructed in accordance with the present invention secured to the porch for screening the same. Fig. 11 is a view in side elevation of a bracket employed in constructing a screened porch.

Referring to the drawings, 1 designates the

side and 2 the end sills. The side and end sills are constructed substantially alike, and for this reason I will only specifically describe one of the sills. The sill comprises an inner, outer, and intermediate section 3, 4, and 5, respectively, Fig. 3.

The sections 3, 4, and 5 are secured together by any suitable fastening means, and said sections have their lower faces lying in the same horizontal plane. However, the intermediate section 5, Fig. 3, is not as wide as the inner and outer sections 3 and 4, respectively, because it is desired to form a groove 6 in each of the sills. Each two of the sills are fixedly secured together by means of a bolt 7, and upon said bolt is threaded a nut 8, which nut 8 is embedded in one of the sills, preferably in the end sill 2. The bolt 7 is positioned in an aperture formed in the outer section 4 and in a recess formed in the end sill 2. It is to be noted that the outer section 4 of the side sill extends beyond the ends of the sections 3 and 5, as is clearly seen in Fig. 6. In some instances, if the house is of considerable length, it is desirable to have the sills of a sectional structure, because by so constructing said sills the shipment or transportation of the house would be facilitated, as the same can be handled and shipped easier than if the sills were not of a sectional structure. For this purpose I form the sills of sections. Inasmuch as each section of the sills are also constructed of sections, Fig. 5, it is desirable to break joint of each section 3, 4, and 5 in different transverse positions, Fig. 8, thereby placing the joints out of the same transverse vertical plane, so that a more durable structure is produced than would be the case if all of the joints of the sections were formed in the same transverse plane. In Fig. 8 the sections of the sill are shown held together by transverse fastening means 9, which fastening means is positioned between each two of the adjoining ends of the sections 3, 4, and 5 of the sectional sill. Horizontal transversely-extending rods 10 are positioned, preferably, upon the side sills 1 and materially increase the durability of the structure, as said rods 10 assist the bolts 7 in fastening the base structure of the house or ground-sills 1 and 2 together.

To secure the base structure or ground-sills in a stationary position upon the ground, I have provided anchors 11. Each anchor is constructed the same, and it will therefore

only be necessary to specifically describe one. The anchor is provided with a straight shank 12, having a pointed lower end 13. The shank or body 12 is bent, as at 14, to form a horizontal shoulder 15. Rising above the shoulder 15 is preferably a flat portion 16, which portion 16 is provided with an aperture or apertures 17. Referring to Fig. 1, it will be seen that the portion 16 rests, preferably, against the outer face of the sills, and any suitable fastening means is positioned within the apertures 17 for securing said anchors to the sills. The sills rest upon the horizontal portion 15 of the anchors, and as the weight of the house retains the shanks or bodies 12 in the ground the house is securely anchored.

The sides or walls of the house are composed of screen-panels, each panel being preferably provided with cleats forming a flanged structure. The corners of the house are constructed by securing to a section a cleat 18, Fig. 1, and having said cleat 18 overlap one of the screen-panels—as, for instance, 19. The front sill 1 is cut away, as at 20, and a door 21 is hinged, as at 22, to one of the screen-panels and is adapted to swing outward in the cut-away portion 20. In some instances the house is of such height as to make it desirable to employ a screen-transom 23. The transom 23 is secured between two panels; but said transom need not be employed if the height of the door is such as to fill the space between the two panels, which space is partly occupied by said door. In the back of the house it is desirable to use a series of panels, and the middle or intermediate panel 24, Fig. 5, is provided with a pair of cleats 25 upon each of its vertical edges, producing a flanged structure. The end panels of the back are positioned within the vertical flanged edges of the middle panel 24. The cleats of the panels overlapping the adjoining panels prevent there being any crack or crevices in the house, which would permit the entrance of insects. The lower ends of all of the panels are seated within the groove 6 of the groundsills, while the upper ends of the panels are likewise seated within a similarly-constructed groove 7 of the wall-plates 26. However, the outer section of the wall-plates is of greater width than either the intermediate or inner section. The lower edges of the outer and inner sections of each of the wall-plates are preferably positioned in the same horizontal plane, while the upper horizontal edge of the outer section of each wall-plate extends a considerable distance above the upper horizontal edges of the intermediate and inner sections. The upper edges of the intermediate and inner sections are positioned in the same horizontal plane, thereby forming a ledge, Fig. 3, on which rests the horizontal screen-panels 27. The screen-panels 27 form a screen-roof for the

house, thereby preventing insects from entering through the roof into the room formed by the sides and top of the house. Bracing-rods 10^a connect, preferably, the side wall-plates the same as rods 10 connect the ground-sills 1. The bracing-rod materially increases the strength and durability of the house.

Referring particularly to Fig. 2, the roof structure comprises a pair of end sections 75 and a middle section. Each end section comprises a mid-rafter 28, hip-rafters 29 29, and supplemental rafters 30. In Fig. 4 one of the end sections is shown in a folded position. The mid-rafter is provided with a substantially V-shaped upper end 31, and each of the hip-rafters 29 and jack-rafters 30 is provided with similarly-constructed inwardly-beveled ends 32. Each rafter 28, 29, and 30 is provided with a pair of parallel notches 33, formed in diametrically opposite portions of the sides, and these notched portions 33 are adapted to be positioned within similarly-constructed notches or cut-out portions of the outer sections of the wall-plates, Fig. 2. Each notch of the wall-plates within which the rafters of the sections are positioned is downwardly beveled or inclined to accommodate the inclined position of the rafters, Fig. 2, and thereby permit said rafters to lie snugly in the notched portions of the wall-plates. Each notch 33 of the wall-plates is formed with a pair of inclined walls 34, Fig. 4. These walls 34 fit snug against the vertical sides of the outer section of the wall-plates. Of course the degree of the inclination of the walls 34 of each notch is controlled by the pitch or slant of the roof. When the end sections of the roof are positioned upon the wall-plates, Fig. 2, the hip-rafters 29 will be at an angle to the mid-rafter 28, and the jack-rafters will be positioned at an angle to the hip-rafters and at right angles to the mid-rafter 28. The hip-rafters 29 are of necessity positioned in notches or cut-out portions formed at the corners of the house or at the adjoining ends of the wall-plates. The walls of the notches formed for accommodating the hip-rafters 29 are at an obtuse angle to the sides of the wall-plates. The middle or central section 35, Fig. 2, comprises a pair of rafters 36 36, hinged at their upper or inner ends 37. The abutting ends 37 of the rafters 36 are inwardly beveled, so that the same preferably fold snugly together. The end and middle sections are fastened together by a device hereinafter described. This device comprises depending projections, preferably nails 38, which are secured to the inner faces of the central rafters 36 and jack-rafters 30. A bar or strip 39 is provided with notches or slits 40, and these notched portions 40 engage the nails 38, whereby the whole roof structure is securely fastened together. The sec-

tions of the roof structure cannot sag or become displaced owing to the bonding or tying of the same together by members 39 and the peculiar notching of the rafters and the wall-plates.

Over the roof structure I preferably spread and secure a roof-canvas 41. The roof-canvas may be attractively decorated by scalloping the ends, as at 42. The lower scalloped ends of the canvas preferably overhang the lower ends of the rafters of the roof-section a considerable distance. It is to be noted that the rafters of the roof structure overhang the sides of the house or panels a considerable distance, thereby not only shedding the water or rain from off the entire sides of the structure, but also forming a suitable shelter for the side curtains and the securing means whereby the roof-canvas is held in position and also the side curtains. Fastened to the extended ends of the rafters and preferably to the under face thereof are hooks 43. These hooks 43 are engaged by any suitable attaching-flaps, as 44, which flaps 44 are secured to the inner face of the roof-canvas. It will therefore be apparent that the roof-canvas is snugly fastened to the roof structure by said fastening means. Each rafter of the roof structure is provided, preferably, with a hook 40^a, which is adapted to engage an eye or staple 40^b, secured to the wall-plates, Fig. 3. It will therefore be seen that by this fastening means each rafter of the roof structure is detachably securely fastened to the body of the house. Of course by unfastening the hooks 40^a and removing the canvas top 41 the sections of the roof structure may be removed from the body of the house after the bonding or tying members or strips 39 have been detached.

While the rods 10 fasten the groundsills together and the rods 10^a the wall-plates, it is desirable to fasten the bottom and roof structure together, and I therefore employ inclined stay-rods 45, the ends of which rods extend through apertures formed in the inner sections of the wall-plates and groundsills, Fig. 3. Upon the ends of the rods 45 and preferably embedded in the inner sections of the wall-plates and groundsills are nuts.

Side curtains 46 are preferably secured, as at 47, by hooks and eyes to the wall-plates, and through the medium of cords 48, passing over pulleys 49, journaled in the wall-plates, Fig. 7, said curtains 46 can be easily raised or lowered from the inside of the house. Of course the ropes 48 may be wrapped around the ordinarily-constructed hooks 50, Fig. 3, when the curtains are in their lowered or raised position. If it is desired, the curtain over the front of the structure may be provided with an ordinarily-constructed flap at the door, whereby ingress and egress to the building will not be prevented.

To secure panels to a porch for screening

the same, this may be done by attaching wall-plates 26 to the frieze of the porch 51 and the sills 1 to the floor by any suitable means. In some instances it may be necessary to employ a substantially L-shaped bracket 52, Fig. 11. The horizontal portion of the bracket is attached to the bottom of the porch, the sills engage the vertical portions of the bracket, and suitable fastening means extend through the sills and said vertical portion of said bracket.

In some of the claims I do not care to unnecessarily limit myself to the specific mentioning of the groundsills, panels, and wall-plates, and therefore I designate such members by the generic term "walls" or "shell," for I mean by the walls of the house the lower portion thereof, exclusive of the roof structure.

What I claim is—

1. In a house, the combination with the walls, of a roof structure supported upon said walls, said roof structure comprising ends and a central section, each end section comprising a mid-rafter having a double beveled, upper edge, hip-rafters hinged to said mid-rafter, each hip-rafter provided with an upper, beveled edge, jack-rafters hinged to said hip-rafters, each jack-rafter provided with an upper, beveled edge, said central section comprising a pair of pivotally-connecting rafters, each rafter of said central section beveled at its upper edge, and bonding means for securing all of said sections together.

2. In a house, the combination with the walls, of a roof structure supported upon said walls, said roof structure comprising end sections and an intermediate, central section, each end section comprising a mid-rafter, hip-rafters hinged to said mid-rafter, a jack-rafter hinged to each of said hip-rafters, said central section comprising rafters hinged together, and parallel bonding means connecting said central and jack rafters.

3. In a portable house, the combination with groundsills, of anchoring means for said groundsills, said anchoring means comprising anchors, each anchor formed from a bar and comprising a smooth, straight shank having a lower, pointed end, said shank bent intermediate its ends and forming a shoulder engaged by the lower end of a sill, said shoulder of the same thickness as said shank and a flat, apertured portion integral with the bent portion of the shank, and fastening means positioned within the apertures of the flat portion and securing the anchor to the sill.

4. In a portable screen-house, the combination of walls provided with wall-plates, said wall-plates provided with notches at and intermediate their corners, a roof structure carried by said body, said roof structure comprising end sections and an intermediate central section, each end section comprising a

mid-rafter positioned in one of the notches intermediate the corners, hip-rafters hinged to said mid-rafter and positioned within the corner-notches, a jack-rafter hinged to each of said hip-rafters and positioned within a notch intermediate the corners, and bonding means connecting said central section and jack-rafters.

5. In a portable screen-house, the combination of walls provided with wall-plates, each wall-plate comprising an outer, an inner, and an intermediate section, the upper, horizontal edge of the inner and intermediate section lying in the same horizontal plane, the lower, horizontal edge of the inner and outer sections positioned in the same horizontal plane, the lower, horizontal edge of the intermediate section positioned in a horizontal plane above the lower edges of said intermediate and outer sections, thereby producing a longitudinally-extending groove in the lower edge of the wall-plate, a panel resting upon the upper edges of the inner and intermediate sections, the upper horizontal edges of the outer sections of the wall-plates positioned in a plane above the upper edges of the inner and intermediate sections of said plates, said outer sections of the wall-plates provided with corner and intermediate notches, a roof structure positioned above said wall-plates, said roof structure comprising end and central sections, said central section comprising rafters positioned within notches intermediate the ends of the wall-plates, each end section comprising a mid-rafter, the mid-rafter positioned within a notch of one of the wall-plates intermediate its ends, hip-rafters hinged at their upper ends to the mid-rafter and positioned in corner-notches of the wall-plates, jack-rafters hinged at their upper ends to the hip-rafters and positioned in notches intermediate the

ends of the wall-plates, and parallel bonding means fastening all of said rafters together.

6. In a portable screen-house, the combination of walls, comprising detachable panels, removable sectional wall-plates positioned upon the upper end of said panels, horizontal and vertical rods securing all of said panels together, a roof structure engaging said wall-plates, said roof structure comprising a central and end sections, said central section comprising a pair of rafters pivotally connected, each end section comprising a mid-rafter provided with a beveled, upper end, hip-rafters beveled at their upper ends and hinged to the mid-rafters intermediate its ends, the beveled upper ends of the hip-rafters normally lying flat against the mid-rafter, jack-rafters beveled at their upper ends and hinged to the hip-rafters intermediate their ends, the beveled end of the jack-rafters normally lying flat against the hip-rafters, and bonding means securing all of said sections together.

7. In a portable screen-house, the combination with the walls, of a roof structure supported upon said walls, said roof structure comprising a central and end sections, the end sections only engaging the central section near the apex of the roof, each end section comprising a pair of hip-rafters abutting at their upper ends, a mid-rafter abutting at its upper end against the two contiguous edges of the hip-rafters, jack-rafters abutting at their upper ends against the hip-rafters, and means pivotally securing all of said rafters together.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

HARRY WINGREN.

Witnesses:

P. A. McKENZIE,
H. MALSCH.