April 11, 1939. E. CHARLOP ET AL 2,153,547

HAMMOCK TENT AND SUPPORT THEREFOR

Filed Dec. 3, 1936 3 Sheets-Sheet 1

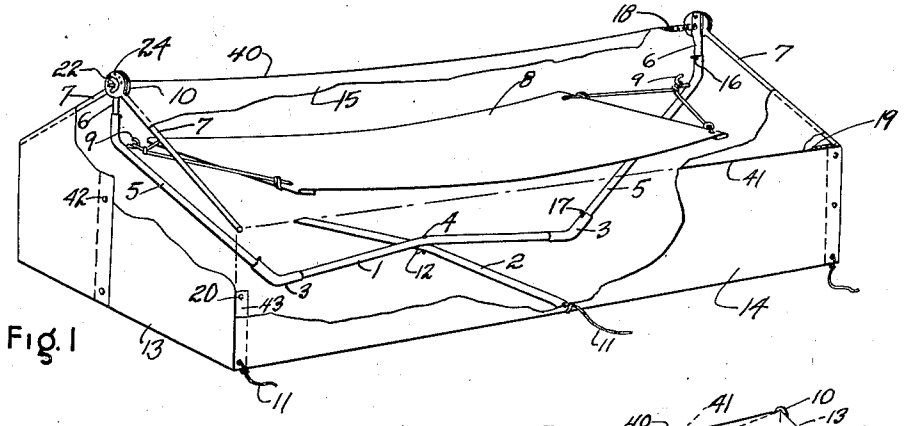


Fig. 1

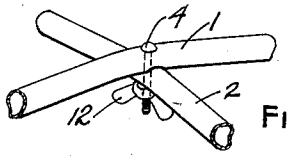


Fig. 3

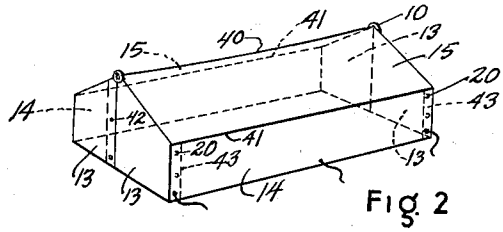


Fig. 2

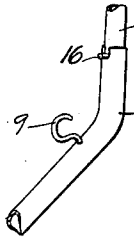


Fig. 4

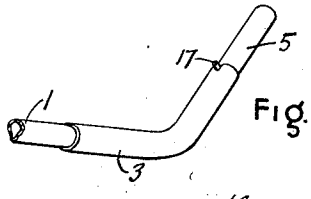


Fig. 6

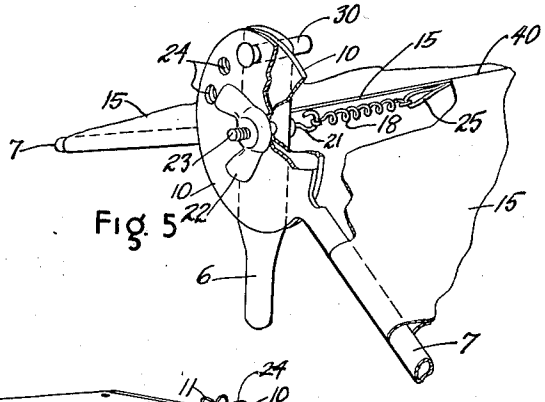


Fig. 5

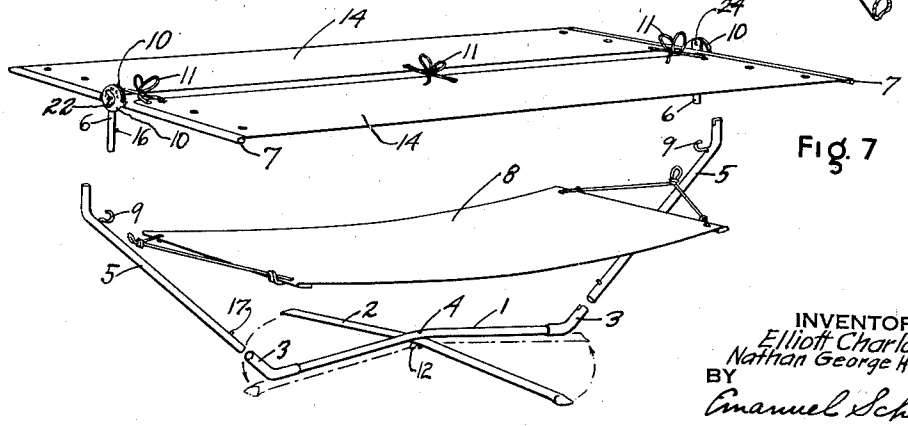


Fig. 7

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HAMMOCK TENT AND SUPPORT THEREFOR

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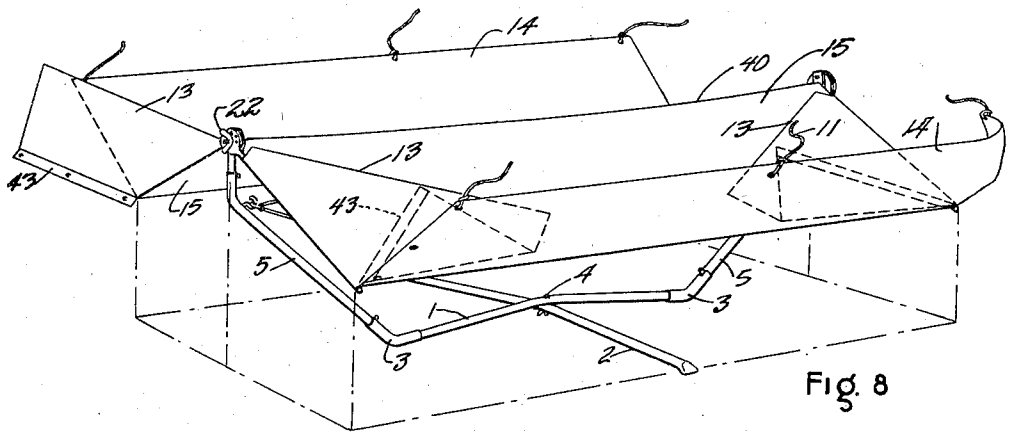


Fig. 8

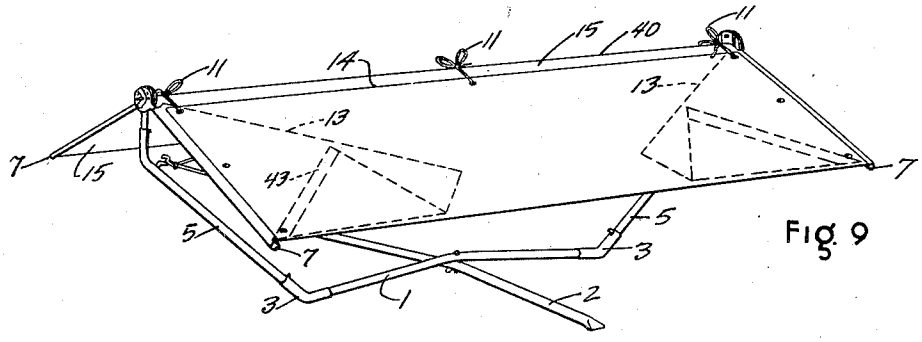


Fig. 9

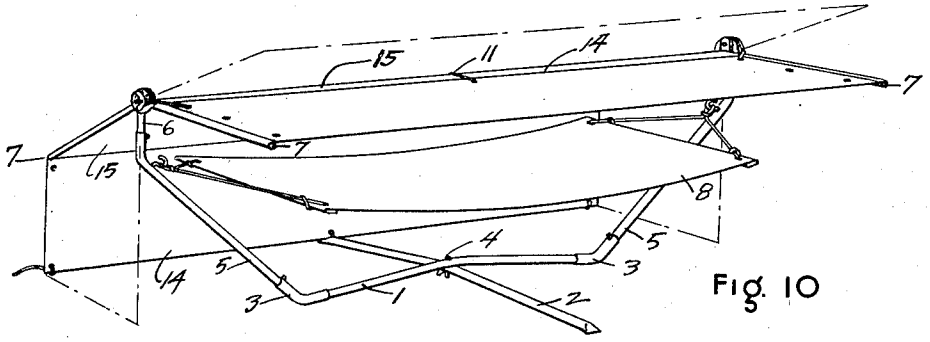


Fig. 10

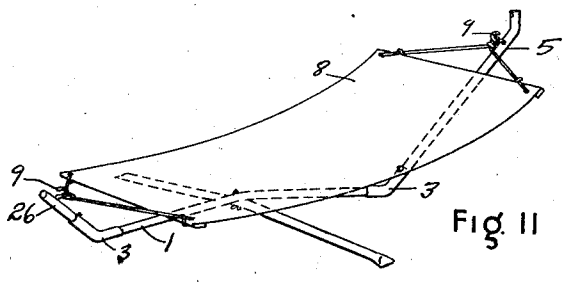


Fig. 11

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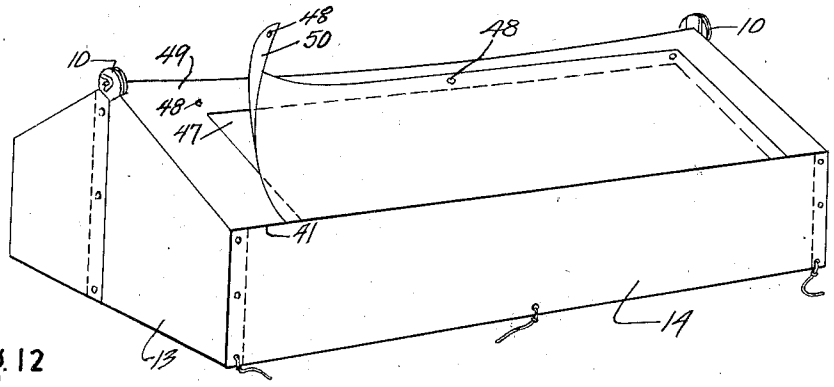


Fig. 12

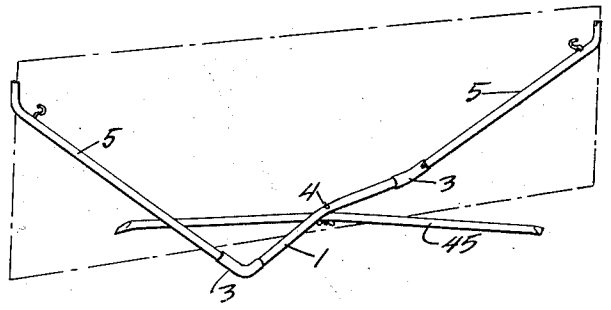


Fig. 13

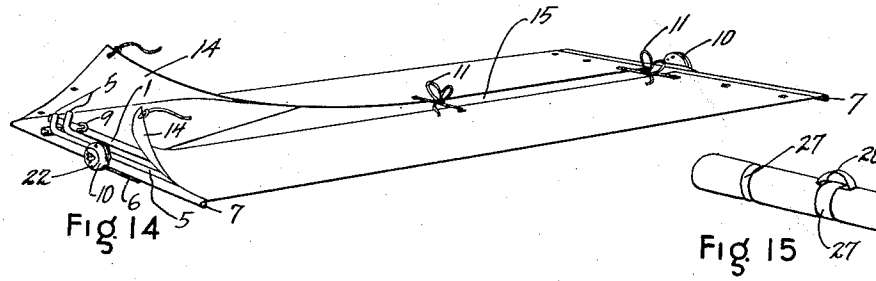


Fig. 14

Fig. 15

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2,153,547

HAMMOCK TENT AND SUPPORT THEREFOR

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Application December 3, 1936, Serial No. 113,978

10 Claims. (Cl. 135—1)

This invention relates to a convertible hammock tent and support therefor. The hammock tent is provided with a supporting frame which is readily taken apart. The flaps of the tent are readily separated and folded back. The tent can be readily folded and rolled up with the separated parts of the frame and hammock inside, making the entire device into a small roll which is readily portable. The frame is adapted to support the hammock as well as the tent, the former being located inside the tent. The frame is of yieldable resilient construction providing a comfortable give to the hammock. The tent is readily converted into several forms. By properly folding back the front, rear and side flaps it can be converted into a sun shade. The upper portion of the frame which supports the roof covering or parts comprises rafters adjustably mounted so that they can be set at different angles to each other and with respect to a fixed axis, enabling the roof parts to be set in various positions to suit changes in the location of the sun. Another form into which the tent can be converted by proper folding of the flaps is a lean-to. The lower frame can be used by itself as a hammock support. Said latter frame can be used by a slight modification to support the hammock as a deck or beach chair. A modified form can be used as a sun bathing tent enabling the occupant to be exposed to the sun and still be hidden from view.

Other objects and advantages will become apparent upon further study of the description and drawings in which:

Fig. 1 is a perspective view of the device fully assembled and in position to form a closed tent with certain parts of the tent covering removed to expose the frame and the hammock.

Fig. 2 is a perspective view of the outside covering showing the device as a closed tent.

Fig. 3 is a fragmental perspective view to an enlarged scale of the portion of the frame at the bottom longitudinal bar and bottom cross bar.

Fig. 4 is a perspective view of the portion of the upstanding side bar at the hammock hook and shows a portion of the upright for supporting the roof of the tent.

Fig. 5 is a perspective view to an enlarged scale showing the portion of the frame at one of the upper corners of the roof together with portions of the rafters, the adjusting device therefor and portions of the tent covering and its attachment to the frame, certain portions of the adjusting device plates being broken away.

Fig. 6 is a perspective view of an enlarged scale of the portion of the frame at the junction of the bottom longitudinal bar and the upstanding side bar.

Fig. 7 is a perspective view of the device with the roof support shown separated from the main supporting frame, the rafters at each end of the roof support being turned at 180 degrees to each other and the tent flaps folded and tied back onto the roof covering.

Fig. 8 is a perspective view of the device showing the lower tent flaps in process of being folded back onto the roof covering, the dot and dash lines showing the tent in its original closed position.

Fig. 9 is a perspective view of the device in a more advanced folded stage of the tent flaps than in Fig. 8, the lower flaps being entirely folded over on the roof covering.

Fig. 10 is a perspective view of the device showing the front and one of the side flaps folded onto the roof covering and the rafters set at the proper angle to transform the tent into a lean-to.

Fig. 11 is a perspective view of the device showing the lower frame and hammock converted into a beach chair, the tent fabric and rafters being removed.

Fig. 12 is a perspective view of a modified form of tent showing the sun-bathing flap partly turned up at one end.

Fig. 13 is a perspective view of a lower frame of alternative construction in which the upright members have their longitudinal axes in different planes.

Fig. 14 is a perspective view of the device in partly packed condition, and

Fig. 15 shows the device in completely packed condition, the frame members, rafters and hammock being rolled up in the tent fabric.

Referring now particularly to Figs. 1, 6, 7, 8, 9 and 10, the lower frame comprises a substantially U-shaped member having tubular uprights **5** and a longitudinal base member formed of bowed tube **1** with elbows **3** fixed at its ends. Uprights **5** have a sliding fit in elbows **3**, each upright having a pin **17**, Fig. 6, which fits into a notch in the upper end of an elbow **3**. A bowed bottom cross arm **2** is pivotally attached at its center by bolt **4** to the underside of tube **1** which is slightly stamped in, Fig. 3, for locking cross arm **2** at right angles to tube **1** when wing nut **12** is screwed tight.

The upper end of each upright **5** is bent at an angle with its lower portion, so that the former extends in a vertical direction when the device is set up for use. Said upper end is adapted to

receive slidably an extension piece 6 whose upper portion is flattened as readily seen in Fig. 5. A pin 16, Fig. 4, is provided on extension piece 6 which fits into a suitable notch, Fig. 4, provided in the upper edge of upright 5 to prevent rotation of said piece. The flattened upper portion of extension piece 6 has fixed therein a bolt 23, Fig. 5, upon which are pivotally mounted friction disks 10. Each disk 10 has extending therefrom a rafter 7. When wing nut 22 is screwed up on bolt 23 the disks 10 are frictionally held in any set position. As a further aid in holding and setting disks 10 in predetermined positions, holes 24 are provided in the disks, a hole is also provided at the top of the flattened end of piece 6 and a pin 30 is inserted through the holes when a hole of each of the disks is brought into register with the hole in piece 6. Holes 24 in disks 10 at one end of the structure bear the same angular relation to the rafters 7 extending therefrom as do the holes 24 in disks 10 at the other end of the structure to their rafters. This ensures the setting of the corresponding rafters at each end of the structure at the same angle, with reference to a fixed axis for a purpose to be given later. Each upright 5 is provided with a hook 9. A hammock 8 is slung between hooks 9.

A tent having various flaps and covering parts is supported by the rafters 7. The roof parts 15 are stitched together to form a ridge 40. The front and rear ends of roof parts 15 are hemmed around rafters 7 as seen in Fig. 5. Loops of cord 25, Fig. 5 are attached to parts 15 near their ends at ridge 40. Each loop 25 is caught on the end of a spring 18, the other end of said spring being mounted on hook 21 fixed to the head of bolt 23 which is embedded in the flattened portion of extension piece 6. Side flaps 14 are fastened to roof parts 15 along eaves 41. A similar arrangement for fastening the flaps at eaves 41 to rafters 7 is used as for fastening the parts at ridge 40. Springs 19 are attached to rafters 7 and to the flaps at the ends of eaves 41, one such spring being shown at the right side of Fig. 1. Springs 18 and 19 serve to keep roof parts 15 taut between rafters 7 at all times even when hammock 8 is loaded and uprights 5 are deflected thereby.

Front and rear end flaps 13 are fastened to roof parts 15 at rafters 7, there being two end flaps 13 at each end of the tent with their inner ends overlapping and adapted to be fastened by snap fasteners 42. End flaps 13 have a small extension 43 at their outer extremities carrying snap fasteners 20 which detachably hold side flaps 14 at their lower portions. This permits side flaps 14 to be detached from flaps 13, when it is desired to fold flaps 13 or 14 back over roof parts 15 as seen in Figs. 8 and 9. Fig. 8 shows said flaps in the process of being folded back, the down or original position of said flaps being shown in dot and dash lines. In Fig. 9 said flaps are shown folded and tied back over the roof parts.

Lash cords 11, which are fastened to side flaps 14, can be used when it is desired to stake the tent to the ground. The same cords can be used to tie back flaps 14 when it is desired to hold them folded back on roof parts 15 as seen in Figs. 7, 9 and 10.

When it is desired to use the device as a shade instead of a tent, the flaps are folded back, Fig. 8, into the position shown in Fig. 9, end flaps 13 being folded in under side flaps 14. By means of the adjusting mechanism shown in detail in Fig. 5 and previously described, rafters 7 at each end can be set at various angles to each other to vary the slope of the shade. The use of pins 30 in holes 24 ensures that there is no warped surface in the tent fabric stretched between the front pair of rafters 7 and between the rear pair of rafters 7 when said pins are set in corresponding holes, as the rafters of each pair then make the same angle with a fixed axis.

In Fig. 10 the device is used as a lean-to, front flap 14 and the forward portions of side flaps 13 being tied back over front roof part 15, and the rear portions of side flaps 13 being tied back over rear roof part 15. The dot and dash line for the forward roof part 15 indicates said part in another position from the horizontal one shown by the solid line. Such change in position is desirable to suit the changes in the sun's location. The dot and dash lines at the sides show the way the rear portion of the side flaps 13 may be let down for further shelter.

In Fig. 11, the device is shown converted into a beach chair. The tent covering is removed and the front upright removed and replaced by a shorter upright 26. Hammock 8 is suspended between hooks 9 carried by the uprights.

When it is desired to fold and wrap up the device for carrying it about, the front and rear flaps 14 and side flaps 13 are disconnected from each other and tied back over roof parts 15 as shown in Fig. 7. The roof frame is removed from the lower frame by lifting extension pieces 6 out of uprights 5. Bottom cross arm 2 is turned parallel to longitudinal base member 1 into the dot and dash position shown for it in Fig. 7. Nuts 22 are loosened, rafters 7 at each end are turned to make an angle of 180 degrees with each other and extension pieces 6 are turned parallel to the rafters. However before tying the forward ends of the front and rear flaps 14 over the roof parts 14, as seen in Fig. 14, the frame members 1 and 5 are disconnected from each other, cross arm 2 remaining attached to base member 1 and placed parallel to the forward pair of rafters 7 under flaps 14. Hammock 8 can then be laid on top of flaps 14 and the whole business then rolled up from the forward end and tied up with straps 27 as seen in Fig. 15. The center strap 27 is provided with a handle 28.

In Fig. 12 a modified form of tent is shown in which sun bathing can be done in private. A roof part 49 is cut out so as to have an opening 47. Covering over this opening is a sun bathing flap 50 which can be turned down along eaves 41. When the tent is to be closed, fasteners 48 hold sun bathing flap 47 to roof part 49.

Instead of having, as in Fig. 10, a lower frame in which the base member 1 and uprights 5 all have their axes in substantially a vertical plane, the frame shown in Fig. 13 has these parts with their axes making an angle with such a plane which is shown in dot and dash lines. Said plane passes through the axes of bolt 4 and the upper vertical portions of uprights 5. Elbows 3 are set on the ends of base member 1 inclining inwardly and oppositely toward said plane causing uprights 5 to incline in opposite directions toward said plane. Cross member 45, which is longer than cross member 2, inclines oppositely to base member 1, when the frame is set up for use, making substantially the same angle with said plane as does said member.

We claim:

1. In a device of the character described, a substantially U-shaped frame having a resilient longitudinal base member bowed-up at its center with its ends adapted to rest on the ground, a

resilient substantially upright member extending from each end of the base member, a transverse member pivotally attached to the base member substantially at the center of the bowed-up portion of the base member for providing lateral support for the frame, and means at the upper portion of each upright member for holding a hammock.

2. In a device of the character described, a frame having a base member, a cross member pivotally attached to said base member substantially at the center of both members, and an upright extending from each end of the base member, each upright being so inclined that a vertical plane can be passed through the pivotal axis of said members, cutting the upper ends of said uprights, with the lower ends of said uprights on opposite sides of and at a substantial distance away from said plane.

3. In a device of the character described, a frame having a base member, a cross member attached to said base member substantially at the center of the base member, said cross member having a length not substantially less than that of the base member, and an upright extending from each end of the base member, each upright inclining upwards and outwards away from said center, the lower ends of said uprights being on opposite sides of and at a substantial distance away from a vertical plane passed through the upper ends of the uprights and through said center.

4. A tent comprising a resilient substantially U-shaped supporting frame adapted to support a hammock between its upper ends, a pair of rafters mounted at each of its upper ends, a pair of roof parts extending between the pairs of rafters, said parts being joined to form a ridge substantially on line with the upper ends of said frame, and flexible resilient means for holding the parts under tension, said means being attached at one end to the frame and at the other end to said parts substantially at said ridge, said means holding the parts taut at said ridge under varying loads in the hammock.

5. A tent comprising a resilient substantially U-shaped supporting frame adapted to support a hammock between its upper ends, a pair of rafters mounted at each of its upper ends, a pair of roof parts extending between the pairs of rafters, said parts being joined to form a ridge substantially on line with the upper ends of the frame, a pair of side parts depending from the roof parts and forming eaves with the roof parts substantially at the outer ends of the rafters, and flexible resilient means for holding the parts under tension under varying loads in the hammock, some of said means being attached at one end to the frame and at the other end to the roof parts substantially at said ridge, and others of said means being attached at one end to the rafters and at the other end to the parts at the eaves.

6. A tent comprising a resilient supporting frame having an upright substantially at each end, a pair of rafters rotatably mounted at the upper portion of each upright about a horizontal axis of rotation, said axis extending longitudinally of said frame, both pairs being rotatable about the same axis of rotation, means for releasably securing the rafters in various angular positions, a pair of roof parts extending between the pairs of rafters and attached thereto along the lengths of the rafters, said parts being joined to form a roof with a ridge when the rafters are inclined, and means for holding the roof under tension substantially along said ridge, attached at one end to the roof substantially at said ridge, and at its other end to the rafters substantially at said axis of rotation.

7. A tent comprising a supporting frame having an upright substantially at each end, a pair of inclinable rafters mounted at the upper part of each upright, a pair of roof parts extending between the pairs of rafters and attached thereto along the lengths of the rafters, said parts being joined to form a roof with a ridge when the rafters are inclined, and flexible resilient means for holding the roof under tension substantially along said ridge, attached at one end to the roof substantially at said ridge, the other end of said means being held by the frame.

8. A tent having inclinable rafters for supporting its roof and flexible resilient means for holding the roof under tension, as claimed in claim 7, in which one end of said means is held by the frame substantially on a line with the ridge formed in the roof when the rafters are inclined.

9. A tent comprising a supporting frame having an upright substantially at each end, a pair of rafters mounted at the upper part of each upright, a pair of roof parts extending between the pairs of rafters and attached thereto along the lengths of the rafters, said parts being joined to form a roof with a ridge, a side part of the tent depending from the lower edge of each roof part, said edges extending substantially between the outer ends of the rafters, a pair of means each having an inner end attached to the roof near an outer end of the ridge and having an outer end attached to the frame substantially at the intersection of the rafters, and a pair of means each having an inner end attached to said lower edge near an outer end thereof and an outer end attached to substantially the end of the nearest rafter, at least one of the means in each pair including resilient means for holding the roof in a stretched condition.

10. A tent comprising a supporting frame having an upright substantially at each end, a pair of rafters mounted at the upper part of each upright, a pair of roof parts extending between the pairs of rafters and attached thereto along the lengths of the rafters, said parts being joined together to form a roof with a ridge, and a pair of means, each having an inner end attached to the roof near an outer end of the ridge and having an outer end attached to the frame, at least one of the means in the pair including resilient means for holding the roof in a stretched condition.

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