

Nov. 3, 1936.

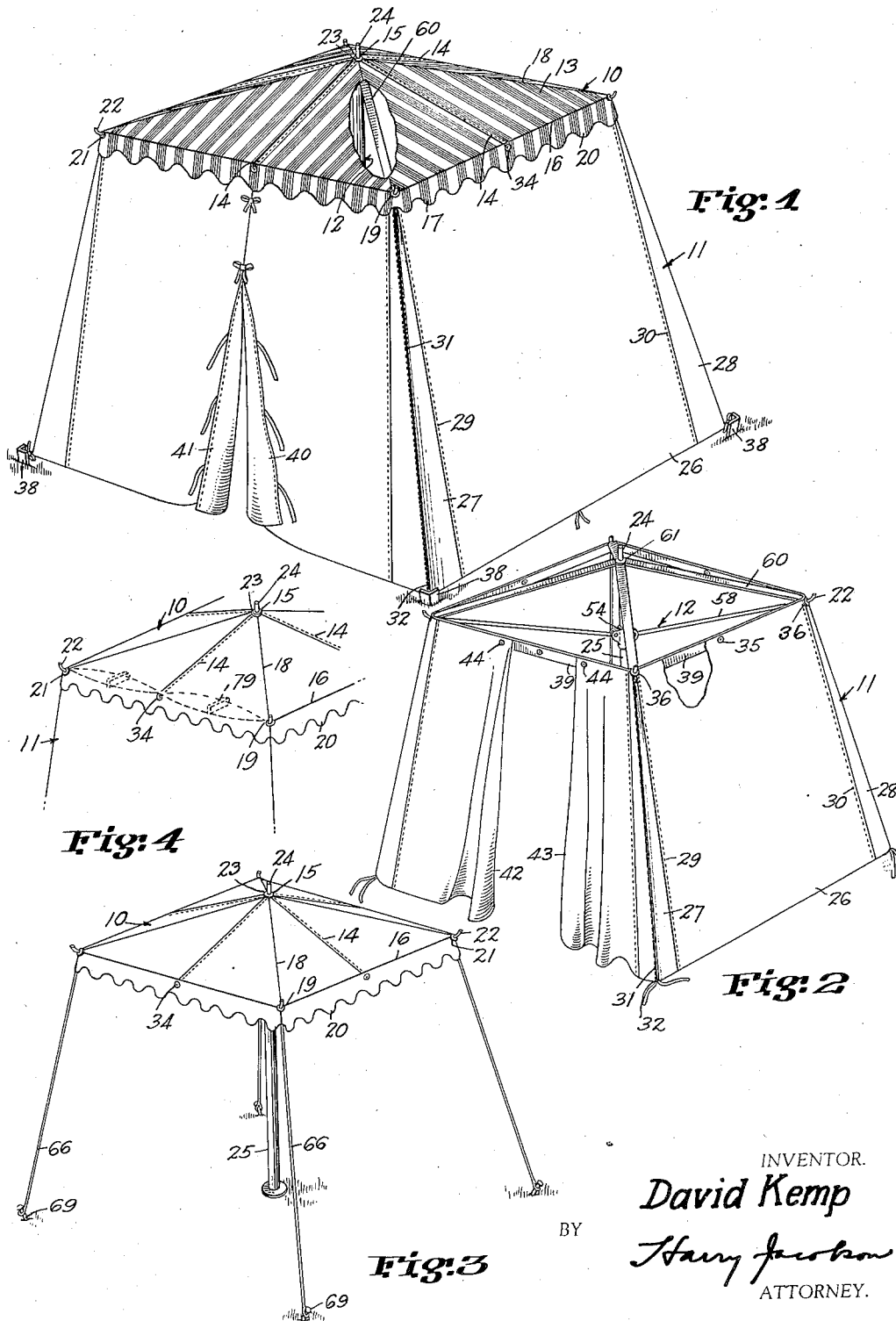
D. KEMP

2,059,463

TENT

Filed May 18, 1935

3 Sheets-Sheet 1



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Nov. 3, 1936.

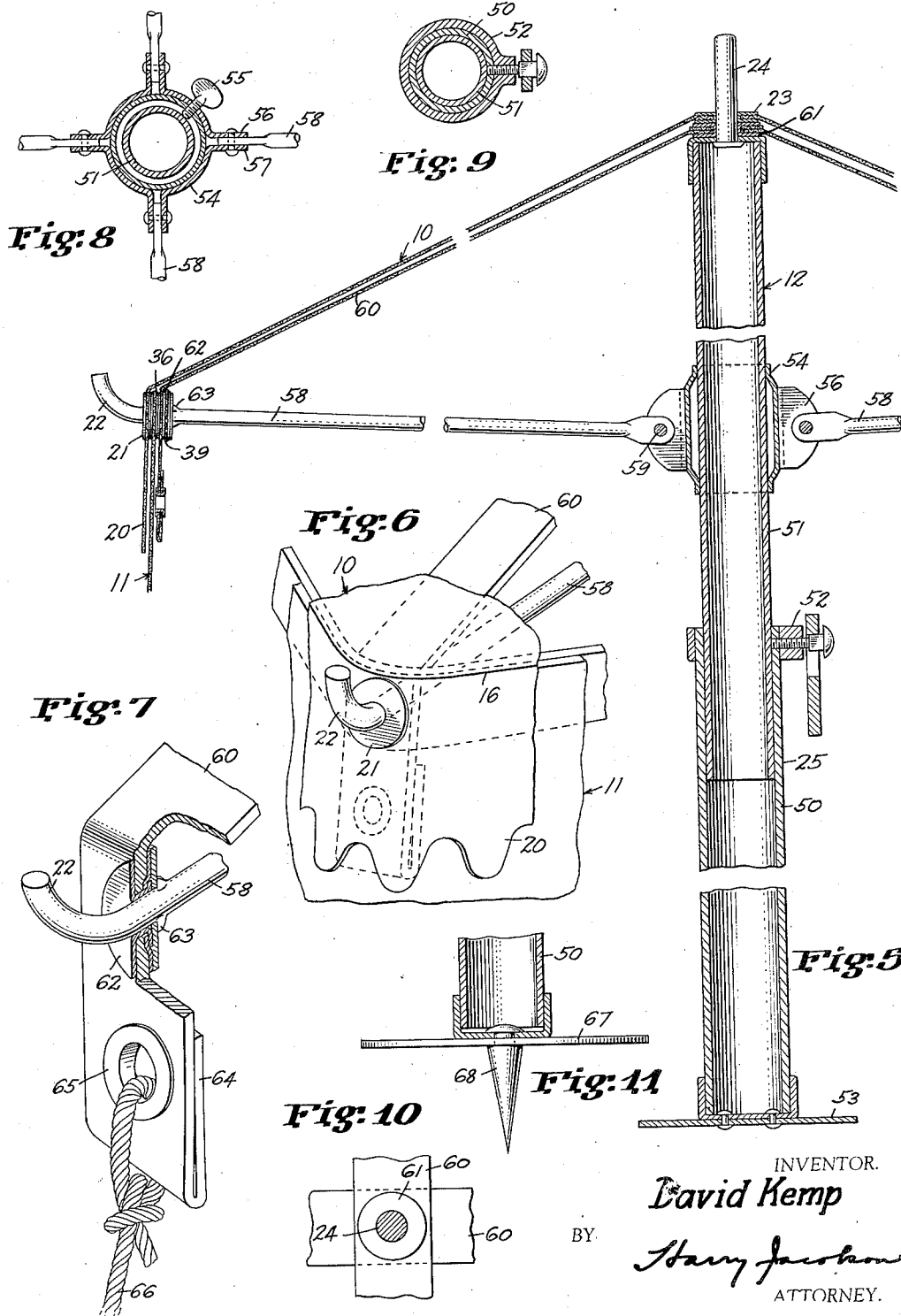
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TENT

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3 Sheets-Sheet 2



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TENT

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3 Sheets-Sheet 3

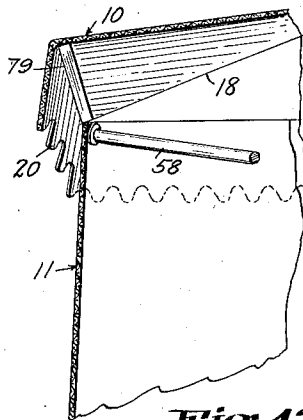


Fig. 12

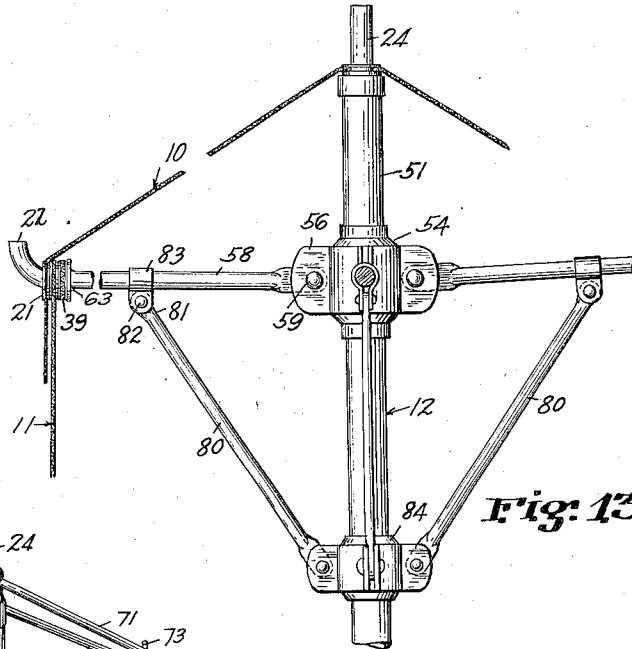


Fig. 13

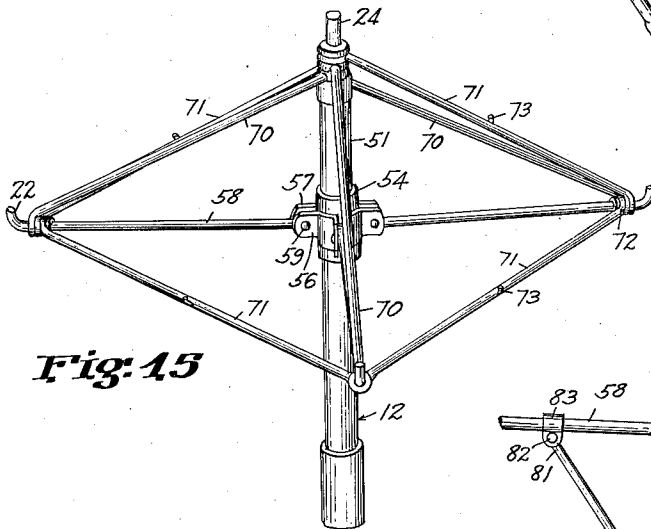


Fig. 15

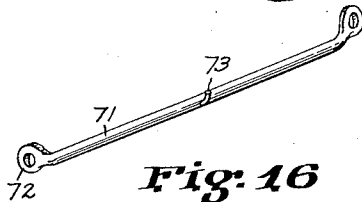


Fig. 16

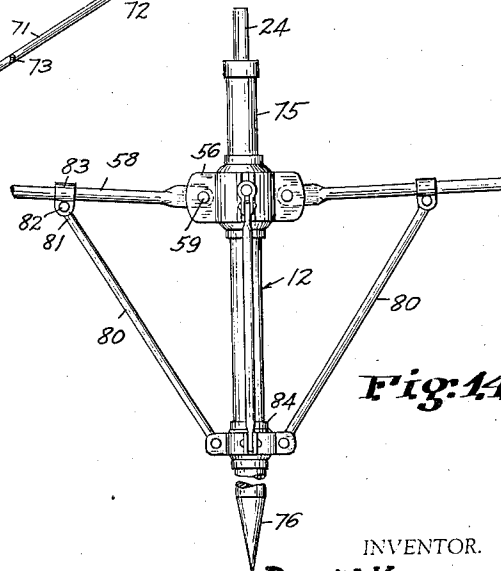


Fig. 14

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UNITED STATES PATENT OFFICE

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TENT

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6 Claims. (Cl. 135—2)

This invention relates to tents and particularly, to the type known as umbrella tents.

My invention contemplates the provision of a tent which may be used in either one of three ways; that is, as an umbrella tent, a sun tent, and an umbrella.

My invention further contemplates the provision of an umbrella tent in which ventilation at the juncture of the roof with the tent walls may be readily attained, and in which the size of the front opening may be regulated as desired.

My invention further contemplates the provision of a tent wherein the roof is detachably connectible to the walls so that on the removal of the roof, an adequately supported sun tent is provided, which protects the user against observation and in which the roof is open to permit sun bathing by the occupant.

My invention further contemplates the provision of a collapsible truss formation for adequately supporting the tent walls independently of the roof.

My invention further contemplates the provision of a collapsible tent provided with a quickly detachable roof and quickly detachable sides whereby the tent may be rapidly and easily converted from or into an umbrella tent, into or from either a sun tent or an umbrella.

My invention further contemplates the provision of a tent of canvas or the like, easy to manipulate and to be set up into its operative position and to fold up into its collapsed position and into compact form for transportation.

The various objects of my invention will be clear from the description which follows, and from the drawings, in which,

Fig. 1 is a perspective view of an umbrella tent embodying my invention, part of the roof being broken away to show the supporting truss tension member.

Fig. 2 is a similar view of the same, showing the roof removed to convert the tent into a sun tent and showing further, a modified form of the door opening.

Fig. 3 is a similar view of the same, with the walls, however, removed and the roof in its operative position to convert the tent into an umbrella.

Fig. 4 is a fragmentary view of my improved tent as it appears when used as an umbrella tent, and showing the transverse separation of the lower edge of the roof from the upper edge of the tent wall to provide a ventilating space therebetween.

Fig. 5 is a fragmentary vertical section of my new tent.

Fig. 6 is a fragmentary perspective view of one corner of the tent showing the means for detachably securing the parts together.

Fig. 7 is a similar fragmentary view, partly in section, of the lower end of the tension member of the collapsible truss, showing the depending strap by means of which the roof can be braced when the tent is to be used as an umbrella.

Fig. 8 is a horizontal section of the bracing means.

Fig. 9 is a similar section of the clamp for the telescopic center post.

Fig. 10 is a fragmentary top view of the intersecting trusses at the point of intersection thereof.

Fig. 11 is a vertical section of a modified form of the lower end of the central tent post.

Fig. 12 is a fragmentary vertical section of my umbrella tent, showing the roof edge raised from the top wall edge to provide a ventilating opening therebetween.

Fig. 13 is an elevational view, partly in section, of a modified form of the bracing means.

Fig. 14 is a similar view of another modified form of the same.

Fig. 15 is a perspective view of still another modified form of the same.

Fig. 16 is a similar view of one of the bracing members shown in Fig. 15.

Tents of the type here involved have been customarily used for camping, bathing and beach purposes. Such tents, however, have heretofore been made with the wall parts inseparably joined to the roof. It has therefore been difficult to ventilate such tents, or to take sun baths therein, or to obtain the benefits of the outside air while the occupant is shaded from the sun.

In the practical embodiment of my invention which I have shown by way of example, I have provided a detachable roof and suitable truss means for supporting the walls independently of or in connection with the roof, whereby the walls are removable independently of the roof and the roof detachable independently of the walls and permitting the tent to be converted into form most desirable to meet any contingency or any use which may arise, and as has been above indicated.

Referring to the drawings, wherein I have shown a now preferred form of my invention, the tent comprises the roof-forming section 10, the wall-forming section 11, and the bracing means 12 for the roof and walls. The roof section 10 is preferably made of pyramidal shape, consisting of a series of right-triangular portions 13 of suitable material designed to keep out rain, such

as canvas, duck or the like, and may, if desired, be of heavier or different material than that of the wall sections 11. The triangular roof sections 13 are seamed together along corresponding sides thereof by suitable stitching 14 running from the highest point 15 of the roof to mid-point of the horizontal edge 16 of the roof section to provide a middle seam on each face or side of the roof section.

It will be understood that each of the roof sections 13 may be so cut from a bolt of cloth as to use a minimum quantity of material to the best advantage. By making the roof in sections stitched together, it also becomes possible to use striped material having stripes as 17 thereon, and to match said stripes along the edges 18 of the roof section. The various sections 13, after being stitched together at the middle seams 14, are also stitched together at the hypotenuses of the right triangles as at 18, so that corner seams are provided extending from the corners 19 of the roof to the apex or point 15. To complete the roof fabric structure, an overhanging valance as 20 is secured to the roof edge 16 in any suitable manner as by stitching. At each of the roof corners, a grommet as 21 is provided, having an opening of the proper size to receive the attaching hook 22 which will be described in more detail hereinafter.

A similar grommet as 23 is provided at the roof apex 15 for the passage of the terminal rod 24 of the center post 25.

The walls 11 are made preferably of canvas, duck or the like material and need not be of as heavy or of the same material as that of the roof section 10. Each of the walls consists preferably of a rectangular central part 26 and triangular edge portions or inserts 27, 28 each secured to an edge of the rectangular part by suitable stitching 29, 30. Each of the walls is secured to the adjacent walls by a corner seam 31 extending from the upper wall grommet 32 to the lower corner 32 of the wall.

In order to detachably secure the roof section 10 to the wall section 11, suitable separable fastening means are provided. As shown, said fastening means takes the form of a snap fastener socket 34 secured to the valance 20 at the end of the same 14, and cooperating with a suitable stud 35 for snapping engagement and disengagement therefrom. At each of the upper corners of the wall section 11 is arranged a grommet 36 (Figs. 5 and 2) having an opening of sufficient size for the passage of the hook 22.

It will thus be seen that by disengaging the snap fastener sockets 34 from their cooperating studs 35, and by further removing the grommets 21 from the hooks 22, the entire roof section 10 may be lifted off the post end 24 to open the tent top to the air, and rolled up into compact form for transportation. Similarly, after the wall section 11 has been set up by securing the corners 32 thereof to suitable stakes as 38 driven into the ground, the roof section 10 may be readily secured to walls to form an umbrella tent by passing the grommet 23 about the post end 24, passing the grommets 21 over the hooks 22, and finally engaging the snap fastener parts 34 and 35.

It will also be understood that the roof section 10 may be supported by and secured to the bracing means for the tent independently of the wall section 11 in a manner which will be later described.

Along the entire upper edge of the wall section 11 is sewn a reinforcing tape 39 serving to

strengthen said edge and to resist the tension put upon the walls when said walls are stretched by the supporting means therefor. Said tape also serves to provide sufficient material for engagement by the grommets 36 to resist the pulling out of said grommets from the walls.

As is customary, one of the walls of the wall section may be vertically slitted along its middle to provide the tent flaps 40, 41 (Fig. 1). However, as shown in Fig. 2, the front flaps 42, 43 may be completely separable from each other and may be stitched or otherwise secured to the upper tape 39 along part of its upper edge only. The flaps are thereby adapted to be secured in partly open position or in closed position, as desired, by means of separable snap fasteners 44 arranged at spaced intervals on said tape 39.

The means 12 for supporting, bracing, and stretching the roof section 10 and/or the wall section 11 will now be described.

As shown in Fig. 5, said means comprises a main telescoping center post 25 having a part 50 in the form of a tube, and to the lower end of which may be secured, if desired, the flat stand 53, intended to rest on the ground. Slidable within the post part 50 is the smaller post part 51, said post parts being secureable together in partly telescoped position by any suitable means, such as the clamp 52 of any well known type and hence which need not be described in detail.

At the upper end of the post section 51 is secured the projecting post end 24, which is designed to pass through the grommet 23 of the roof section in the manner hereinbefore described. On said post section 51 is slidably mounted the built-up sleeve 54, said sleeve being movable with the post section 51 as a unit when said section enters or is withdrawn from the stationary post section 50. The sleeve 54 may be secured in adjusted position on the post part 51 by any suitable means such as the set screw 55 (Fig. 8). Projecting radially from the sleeve 54 preferably at equally spaced intervals are the outstanding pairs of flanges 56, 57, between each pair of which are pivotally secured one of the ends of a truss compression member 58, as by means of a suitable rivet 59. The other end of the compression member 58 terminates in a hook 22 previously described.

In order to provide a pair of intersecting trusses for the proper support of the wall section 11 when the roof section 10 is not in use, and to aid in supporting said roof section, I have provided a series of tension members 60 shown in Figs. 1, 2, 5, and 7 in the form of flexible tapes intersecting at the highest point 15 of the roof and being there provided with a suitable grommet 61, (Fig. 10) through which is passed the post end 24. Said tension members extend from the post end past the lower corners of the roof section, which corners register with the upper corners of the wall section. At each of said corners (see Fig. 7), a suitable grommet as 62 is provided for the passage of the hook 22. To limit the distance which said hook and which the compression rod 58 may extend through the grommet 62, suitable projections as 63 may be made on the rod as by squeezing the rod material to form lugs extending therefrom. A suitable washer may be interposed between the lugs and the grommet.

The tapes or tension members 60 may be folded back on themselves at their lowermost ends as at 64 and are there provided with a grommet 65. Said last-mentioned grommet may

be utilized as shown in Figs. 3 and 7 for the purpose of receiving one end of a rope or tying member 66, the other end of which is secured to a suitable stake as 69 driven into the ground so that an adequately braced tent frame is provided for bracing the roof section 10.

It will be understood, however, that the ropes or tying members 66 may be entirely dispensed with, and that the grommet 65 may be used for the purpose of hanging articles therefrom. It will also be understood that to replace the ropes 66, the stand portion 67 at the lower end of the post may be made of sufficient diameter to prevent swaying of the center post (Fig. 11). In order to further prevent movement of the lower end of the center post, a suitably pointed member as 68 may be suitably secured to the center post to project vertically therefrom so that said pointed member 68 may be driven into the ground and may cooperate with or used in place of the enlarged stand 67 in my improved tent when the tent is converted into a stationary umbrella.

When both the roof and wall sections of the tent are in simultaneous use, ventilation is obtained in the usual manner by opening the flaps 40, 41 to the limited extent to which said flaps can open. Where the flaps 42 and 43 are provided, said flaps are opened to the desired extent. Should even a greater amount of ventilation be needed than that possible to obtain by opening the flaps, then the lower edge 16 of the roof section may be separated from the upper edge of the wall section at a number of points to provide a space therebetween for the passage of air.

As shown in Fig. 4, any suitable object such as the stick 79 may be inserted between the valance 20 and the upper part of the tent wall to stretch the valance and tent wall apart horizontally or vertically, as shown in Fig. 12, and thereby to provide the desired ventilating space, the valance preventing rain from coming in through said space.

It will be understood that the tension members 60 in connection with the compression members 58 and the upright center post 25 form a pair of intersecting trusses well adapted to sustain the weight of the walls when the walls and bracing means are used together without the roof to form a sun tent, and that said trusses are also designed to take a normal amount of wind stresses without danger of collapse.

It will further be seen that when the roof is removed and the walls maintained in place by the bracing means, the tent becomes a sun tent, admitting the rays of the sun so that the user may take sun baths with adequate privacy. For protection against the sun or rain, it will be seen that the roof may be easily arranged in place, as has been hereinbefore explained.

In that form of my invention shown in Fig. 15, the tension members take the form of rods 70 in place of the tapes 60. Said rods may be of round or flat form, as may be found convenient. At their respective ends, each of the rods 70 is apertured to receive the post end 24 and the hook 22. Horizontal cross braces or spreaders as 71 may also be arranged between adjacent hooks 22.

While said braces or spreaders may take any convenient form such as the form of tapes of metal or fabric, as shown in Fig. 15, however, rods 71 are provided, each having perforated ends 72 designed to receive adjacent hooks 22.

Intermediate the ends of each of the rods 71 is provided an outstanding preferably curved pin 73 adapted to enter a suitable opening or grommet in the upper edge of the wall section 11 which, in this form of my invention, replaces the socket 35.

In Fig. 14, I have shown a non-telescopic center post 75, which may be merely a wooden pole, sharpened at its lower end 76 to be readily driven into the ground. In Fig. 14 and also in Fig. 13, I have in addition shown a modified form of the collapsible bracing means in which the tension members 60 or 70 have been replaced by the collapsible braces 80. At their upper ends 81, each of said braces is pivoted to an arm 58 as by means of the rivet 82 entering the bracket 83 which is fixed to said arm. At its lower end, the brace 80 is pivoted to the sliding sleeve 84 which is mounted on the post and which is similar to the sleeve 54. It will be seen that when the roof section 10 is not in place on the bracing means or tent frame, the braces 80 serve to brace the arms 58 sufficiently to support the wall section 10 against the various stresses to which the tent may be subjected.

It will be seen that I have provided a simple but nevertheless efficient portable tent wherein the roof and the walls are independently supported, and may therefore be separately attached and detached from the bracing means, thereby providing a structure well adapted to meet the severe and varied requirements of practical use.

While I have shown and described certain specific embodiments of my invention, I do not wish to be understood as limiting myself thereto but desire to claim my invention as broadly as may be permitted by the state of the prior art and the scope of the appended claims.

I claim:

1. In a roofless sun tent, a four-sided wall section, each of the sides of said section being trapezoidal and comprising a central rectangular portion and a pair of triangular edge portions, each secured to an edge of the central portion, said wall section having means for supporting said sides in stretched and spread positions and inclined upwardly and inwardly, including a center post, arms extending from said post to said sides, and intersecting fabric tapes extending from the upper end of the post to the upper corners of the walls, a pair of transversely separable flaps in one of said sides and means for securing said flaps in variable spaced relation to permit variation of the front opening between the flaps.

2. In a roofless sun tent, a center support and radial bracing arms, a wall section comprising side walls, each wall having a central rectangular portion and a pair of triangular edge portions secured to the central portion, and means for securing said side walls in upwardly and inwardly inclined position comprising means for securing the lower corners of the wall section to the ground in outwardly spaced relation to the corresponding upper corners thereof, and means adapted to extend over the top of the center support and detachably connectible to the ends of the radial arms comprising a pair of intersecting fabric tapes of insufficient width to materially reduce the amount of sunlight entering the space enclosed by said side walls from above.

3. In a roofless sun tent having an open top, a wall section comprising trapezoidal side walls each of greater width at the lower edge thereof than at the upper edge thereof, the upper edges

of said side walls being provided with horizontally spaced snap fastener elements, means for supporting said side walls in stretched position including a center post, radial arms extending from said post and intersecting fabric tapes extending from the center post to the upper corners of said wall section, said tapes being of insufficient width to cut off any material amount of sunlight entering the space enclosed by said side walls from above and means for securing the lower corners of said wall section to the ground in outwardly spaced relation to the corresponding upper corners thereof whereby said side walls are inclined upwardly and inwardly, said snap fastener elements being securable to cooperating fastener elements on a roof section supportable at its center by said said center post, and at the lower corners thereof by said radial arms, and also supportable by said tapes.

4. A roofless tent adapted to have a roof detachably secured thereto comprising a wall section having trapezoidal sides and collapsible truss means for supporting said sides in upwardly and inwardly inclined position including a pair of intersecting trusses each having tension elements in the form of flexible, foldable intersecting tapes extending from the center of said truss means to the corners of said wall sections and snap fastener elements secured at spaced intervals to the upper edge of said wall sections and adapted to engage cooperating elements on the lower edge of said roof.

5. In a tent, a wall section and collapsible supporting means for said section, said means including a center post, arms radiating from said post, a pair of continuous flexible fabric tapes intersecting each other at their centers and extending from the top of the center post to and beyond the outer ends of said arms, said arms being of uniform cross section throughout, up-

wardly curved outer end portions on said arms, projections outstanding from said arms at circumferentially spaced intervals at the points where said curved portions join the remainder of said arms, grommets in said tapes at the outer ends of said arms, said grommets engaging said projections to prevent the sliding of said grommets along said arms, additional grommets in said tapes outwardly beyond said first mentioned grommets, a guy rope for each of said additional grommets, a central grommet joining said tapes together in overlapped relation at the intersection thereof, and snap fastener elements on the upper edge of said wall section, said elements being adapted to engage cooperating elements on a roof section arrangeable on said center post and on said tapes for detachably connecting the roof section to the wall section.

6. In a tent, a detachable roof section provided with snap fastener elements at its lower edge portion, a wall section having snap fastener elements at the upper end portion thereof adapted to cooperate with the fastener elements of the roof section to detachably secure said sections together, means for removably supporting the upper corners of the wall section in spread and stretched relation comprising a center post and arms extending radially therefrom, a tape secured to the upper end of the wall section, said wall section having an upright slit therein defining front flaps thereon, the upper ends of said front flaps being free of said tape and separable horizontally spaced snap fastener elements on the tape and on the upper ends of said flaps for securing the upper ends of said flaps to the tape in variable spaced relation, and thereby to permit variation of the front tent opening between the flaps.

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