



Oct. 8, 1968

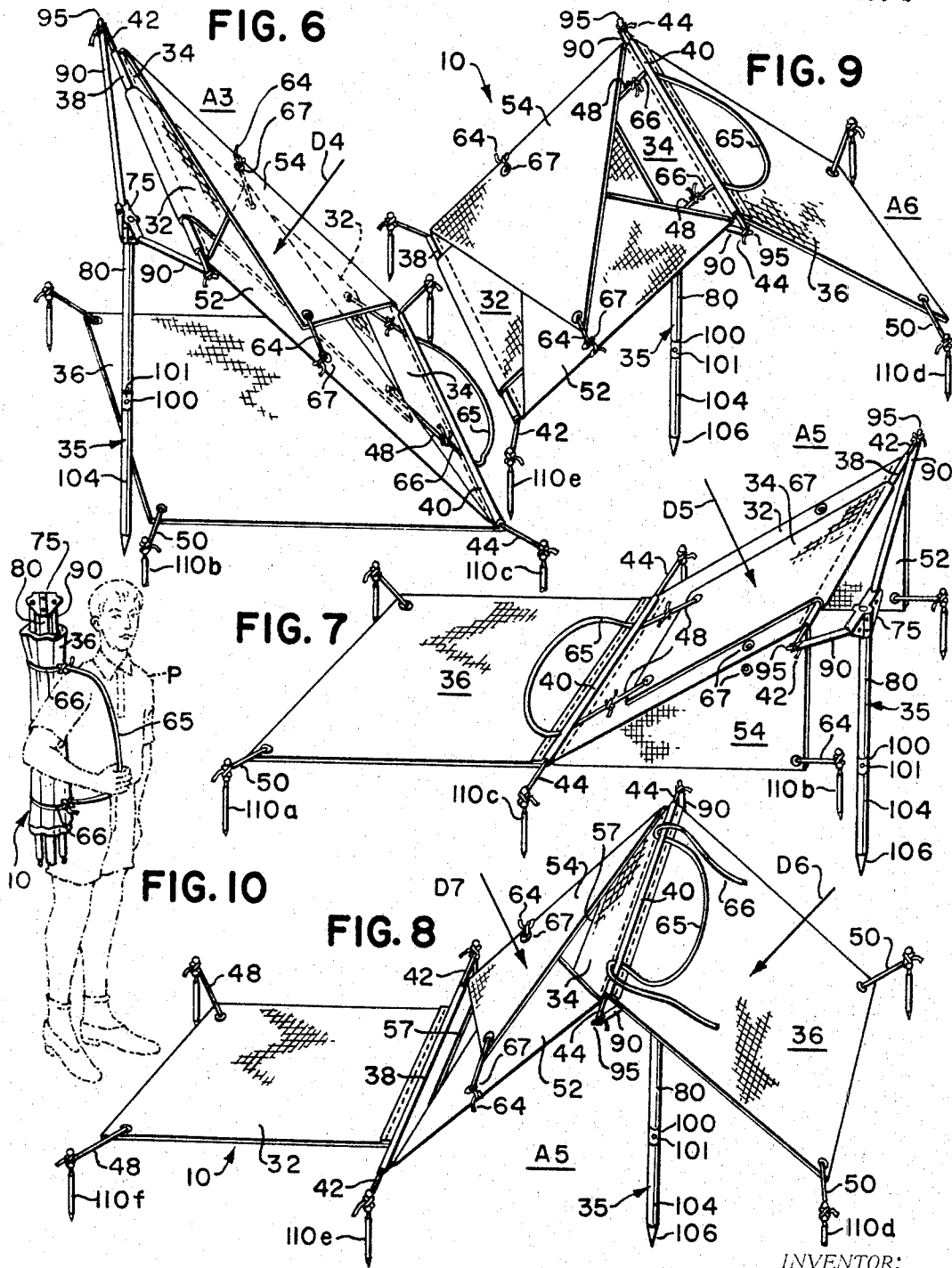
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3,404,696

BEACH TENT

Filed Jan. 25, 1967

3 Sheets-Sheet 2



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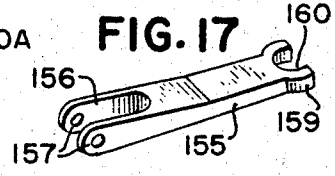
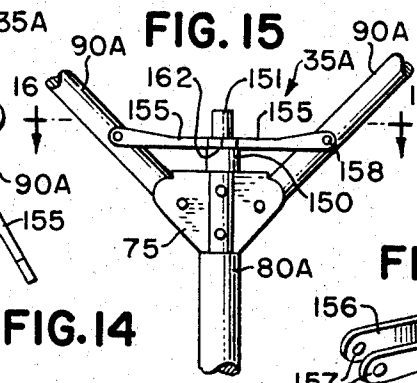
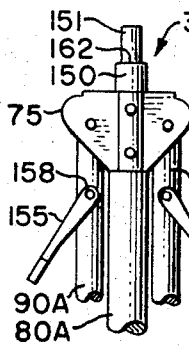
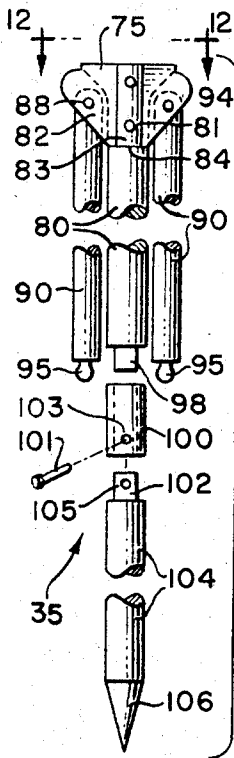


FIG. 11

FIG. 14

FIG. 15

FIG. 17

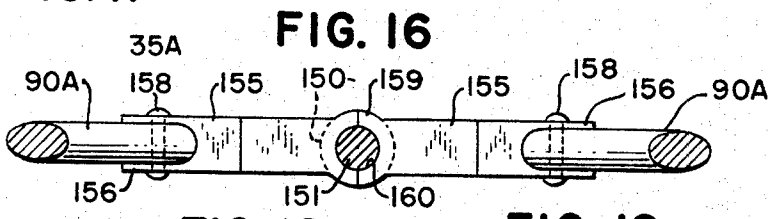


FIG. 16

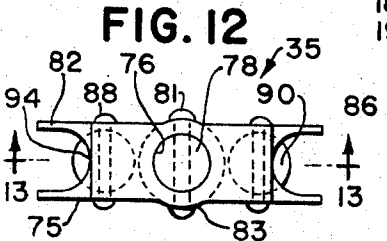


FIG. 12

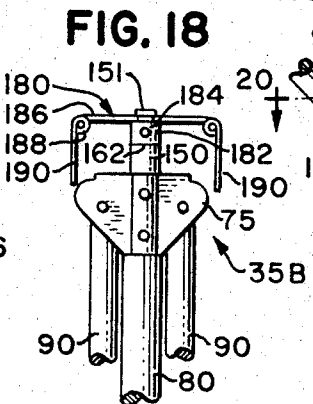


FIG. 18

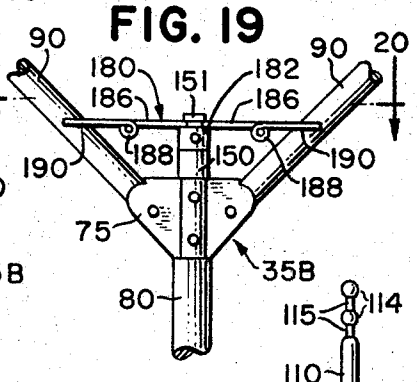


FIG. 19

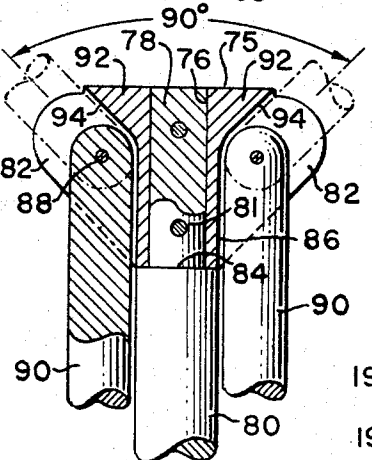


FIG. 13

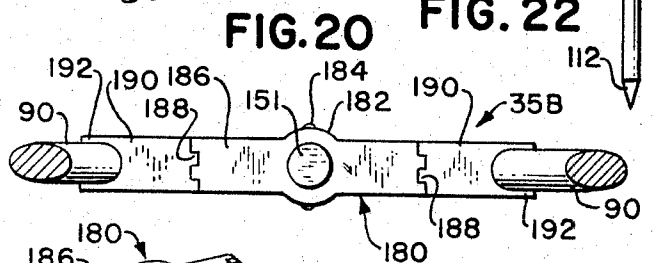


FIG. 20

FIG. 22

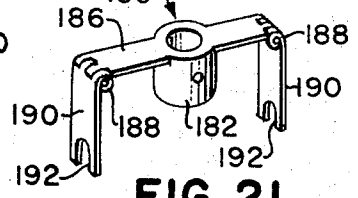


FIG. 21

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BEACH TENT

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## ABSTRACT OF THE DISCLOSURE

The disclosure describes a collapsible beach tent which serves as a sunshade for one or more persons on a sand beach. The tent includes a plurality of panels made of flexible opaque material. The tent can be set up in a variety of ways. It is stabilized by pegs anchored in the sand. One panel has a rectangular opening which can be closed by another panel. The tent is supported on a Y-shaped post having pivotable arms which can be turned down in collapsing the post.

The invention concerns a beach tent to provide sunshade and some protection from wind and blown sand on a sand beach. According to the invention there is provided a beach tent which includes a cover having a plurality of attached panels made of flexible opaque sheet material. The cover has three rectangular panels joined end-to-end, which serve as top, bottom and end walls of the tent. The cover also has two triangular panels each having one edge joined to a different lateral edge of one of the rectangular panels, to serve as vertical side walls of the tent. The top panel has a rectangular opening which can be closed by another of the panels. A Y-shaped post with pivotally attached arms mounted to a bracket on a center pole, is used to hold the cover of the tent elevated above the surface of the sand beach. Corners of the panels have cords which can be secured to pegs anchored or embedded in the sand. The post is provided with a separable section having a pointed end, which can be anchored or embedded in the sand. The pegs may have bulbous ends for engaging cords thereon to hold the panels of the cover in a flat, taut condition. Brace arms can be provided on the post to supplement the bracket in supporting the cover. The tent is arranged so that it can be set up in a variety of positions on the sand beach to provide shade from the sun and limited protection from wind and blown sand. The tent is collapsible so that it can be folded and rolled to form a compact bundle which can be easily carried and stored. In another form of the invention, the opening in the top panel can be closed by a transparent window to provide further protection from wind and blowing sand while admitting sunshine to the interior of the tent.

It is therefore a principal object of the invention to provide a beach tent arranged to serve as a sunshade and windbreak for one or more persons on a sand beach, the tent including a cover having a plurality of rectangular panels joined end-to-end to serve as walls of the tent, with a pair of triangular panels joined to one of the rectangular panels to serve as vertical sides of the tent, the one panel having a rectangular opening which can be closed by another one of the rectangular panels or by the triangular panels.

Another object is to provide a beach tent as last described, with a Y-shaped post to support the cover, the post having pivotable arms joined to a bracket on a central pole, the arms being arranged to turn down for collapsing the post, the panels being provided with transverse seams in which are cords, any one of the cords being engageable on ends of the arms so that the one rectangular panel will be supported in a flat taut condi-

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tion in a position inclined to the surface of the sand beach.

A further object is to provide a beach tent as described, wherein the post has hinged brace bars or arms to help the bracket in holding the arms of the post in an upwardly and outwardly extending position.

The invention will be better understood and further objects and advantages will become apparent from the following detailed description taken together with the drawings, wherein:

FIG. 1 is a plan view of the cover of a beach tent according to the invention, the cover being shown in spread out position.

FIG. 2 is a fragmentary enlarged sectional view taken on line 2-2 of FIG. 1.

FIG. 3 is a perspective view of the tent in a first set up position.

FIG. 4 is an end elevational view of the tent set up as shown in FIG. 3.

FIGS. 5 through 9 are perspective views of the tent in five other different set up positions.

FIG. 10 is a view of the tent in a wholly collapsed position arranged to be carried easily and conveniently by a single person.

FIG. 11 is an exploded side view with parts omitted or broken away of the tent support post, with arms shown lowered and retracted.

FIG. 12 is an enlarged end view taken on line 12-12 of FIG. 11.

FIG. 13 is a fragmentary sectional view taken on line 13-13 of FIG. 12.

FIG. 14 is a fragmentary side view on the same scale as FIG. 11, showing another post structure, with arms and hinged brace bars in lowered or retracted position.

FIG. 15 in a view similar to FIG. 14, the post arms and brace bars being in extended position.

FIG. 16 is an enlarged horizontal sectional view taken on line 16-16 of FIG. 15.

FIG. 17 is a perspective view of a brace bar employed on the post of FIGS. 14-16.

FIG. 18 is a side view similar to FIG. 14, showing part of another post with arms and hinged brace bars in lowered position.

FIG. 19 is a side view similar to FIG. 15, showing the post of FIG. 18 with arms and brace bars extended.

FIG. 20 is an enlarged horizontal sectional view taken on line 20-20 of FIG. 19.

FIG. 21 is a perspective view of the hinged brace bars per se of FIGS. 20-22, the brace bars forming part of a hinge bracket.

FIG. 22 is a side view of a peg useful as an anchoring device for the tent cover.

FIG. 23 is a fragmentary plan view of the cover of another beach tent embodying a modification of the invention.

FIG. 24 is an enlarged fragmentary sectional view taken on line 24-24 of FIG. 23.

Referring first to FIGS. 2-4, there is shown a beach tent 25 including a cover 30 and main supporting post or post assembly 35. The cover 30 is made from one or more pieces of opaque flexible sheet material such as woven or pressed fibers, cloth, sheet plastic, paper, paper reinforced with resin plastic, or other suitable sheet material which is relatively strong, dimensionally stable, and resistant to tearing and moisture. The cover as best shown in FIGS. 1, 3 and 4, has three generally rectangular panels 32, 34 and 36 attached end-to-end at seams 38 and 40. Seams 38 and 40 are tubular as clearly shown in FIG. 2. Through the seams are threaded cords or ropes 42, 44. Opposite ends of the cords extend outwardly of the ends of the seams. At outer free corners 45, 46

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of end panels 32, 36 are cords 48, 50 secured in any suitable manner, such as by rivets or eyelets 51. The cover 30 has two generally triangular panels 52, 54 which extend like wings outwardly of lateral edges 55 of central panel 34. The outer corners 56 of the triangular panels are about 90° or slightly less, and the longest edges of the panels are coincident with edges 55 of the central panel 34.

Central panel 34 has a rectangular opening 57 which has one end edge 58 close to seam 38 and parallel thereto. Lateral edges 60 are parallel to edges 55 of panel 34. The other end edge 62 of the opening is parallel to and spaced further from seam 40 than edge 58 is spaced from seam 38. End panel 32 is substantially as wide as panels 34 and 36 or may be slightly narrower than these panels. Panel 32 is shorter than panel 34 but is wider and longer than opening 57 so as to close this opening completely when panel 32 overlays panel 34. Cords 64 are secured near corners 56 of the triangular wings or panels 52, 54. Panel 36 is slightly shorter than panel 34, although it may be the same size if desired. Panels 34 and 36 are equal in width. A loop 65 and two straps 66 are provided at seam 40. These straps are used in holding the tent in a wholly collapsed condition and also to hold panel 32 in a position overlaying panel 34. Loop 65 is used when the collapsed tent is carried. Eyelets or holes 67 can be provided in panels 34, 52 and 54 near edges 55 to engage cords 64 of panels 52, 54 for holding the triangular panels flat while overlaying panel 34.

The main support post or post assembly 35 is shown to best advantage in FIGS. 3, 4, and 11-13 to which reference is now made. The post has a main bracket 75 which is rather trapezoidal in vertical section, with a flat top, flat bottom and inclined ends. The bracket is formed with a central axially vertical passage 76 in which is inserted tenon 78 formed on the upper end of main central pole 80. The tenon is secured by two rivets 81 extending transversely through the tenon and adjacent walls 82 of the bracket. Walls 82 have central concave sections 83 which are externally convex. These sections conform to the cylindrical sides of the tenon 78. On annular ledge 84 at the base of the tenon seats the bottom end of the bracket. The bracket is formed with two concave recesses 86 across which extend pintles or rivets 88 on which are supported upper ends of two pivotable arms 90. The bracket has two abutments 92 which are generally triangular in vertical section as clearly shown in FIG. 13. These abutments have slanted undersides 94 flaring outwardly and upwardly at an angle to each other of about 90° so that when the arms 90 are turned upwardly as far as possible to the dotted line positions indicated in FIG. 13, the pivoted ends of the arms bear against the undersides 94 of the abutments. The axes of the upwardly extended arms in this position are then about 90° apart. Free ends of the arms terminate in knobs or tenons 95. The arms are approximately as long as pole 80.

Pole 80 is formed with a tenon 98 at its lower free end. This tenon fits slidably into a cylindrical ferrule 100. Ferrule 100 is secured by rivet 101 to a tenon 102 at the upper end of a pole section of extension 104. Rivet 101 extends through holes 103, 105 in the tenon and ferrule. Pole section 104 is axially aligned with pole 80 when the two are fitted together and held frictionally by the ferrule. The free lower end 106 of the pole section 104 is pointed or conical to pierce the surface of a sand beach in which post 35 will be anchored and on which the tent will be erected. Normally the post extension will be inserted in the sand almost as far as the ferrule 100 so that pole 80 is securely and effectively supported in an axially vertical position.

Pegs 110 are constructed as best shown in FIG. 22. They are used to anchor corners of the tent cover 30. Each peg 110 is cylindrical in form with a pointed lower end 112 to pierce the surface of the sand beach easily. Two knobs 114 are provided at the upper end of the peg. The knobs are spaced apart by short cylindrical sections

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115 reduced in diameter with respect to the knobs. This peg structure makes it possible to tie cords or ropes to the pegs at the knobs with assurance that they will not come loose.

FIGS. 3 and 4 show the tent 25 set up in a first array A1 with the ends of cord 42 which extends through seam 38 tied to the knobs 95 at the ends of post arms 90. The post is disposed in a Y-shaped vertical position. The cord 42 is stretched taut at seam 38 so that panels 32 and 34 assume an inverted V-shape and form the roof or top of the tent. Panel 36 is disposed horizontally under panels 32 and 34 and serves a bottom or floor covering. The side panels or wings 52, 54 are vertically disposed.

The tent is anchored at the bottom by three pairs of pegs 110a-110c. Cords 48 are secured to pegs 110a at bottom corners of panel 32. Cords 50 at corners 46 of panel 36 and cords 64 at corners 56 of panels 52, 54 are secured to pegs 110b. Ends of cord 44 in seam 40 are secured to pegs 110c. The cord 44 is stretched taut so that panels 34 and 36 are flat without slack. Slanted panels 32 and 34 define a peaked top for the tent. Vertical panels 52 and 54 define lateral walls of the tent only for the part covered by panel 34 since panels 52, 54 depend only from the lateral edges of this central panel. The opening 57 in panel 34 is clear and open to the sun and air. In this arrangement of the tent a person who sits inside on the bottom panel 36 is protected to some extent from wind and blowing sand by end panel 32, while sunshine is admitted through opening 57 in direction D1. If the sunshine is directed in direction D2 at panel 32, then the person inside the tent sits in shade while having a view of his environment through opening 57 as well as both openings defined between adjacent edges 121 and 122 of panel 32 and panels 52, 54.

FIG. 5 shows the tent arranged in a second array A2. All the panels except panel 32 are arranged in the same way as in array A1, and post 35 is disposed in the same vertical Y-shaped position. Panel 32 now overlays panel 34 and completely covers and closes opening 57. Cords 48 are secured to straps 66 to hold the panel 32 flat and in place. This defines a four-sided tent with top, bottom and two sides, and with one open end. If the sun is directed in direction D3 at panels 32, 34, a person sitting inside the tent sits in full shade, while freedom of access is had through the open end under extended arms 90 of post 35. Cords 48 at corners 45 of panel 32 are secured to the same pegs 110c as engage the ends of cord 44. Pegs 110a are used in array A1 but are omitted in array A2. Pegs 110b hold cords 50 and 64 of panels 36, 52, 54.

FIG. 6 shows tent 25 arranged in array A3 which is similar to arrays A1 and A2 insofar as panels 32, 34, 36, pegs 110b, 110c, and post 35 are concerned. Panel 32 overlays panel 34 to close opening 57 as in array A2. Panels 52 and 54 are overlapped on panels 32, 34. Cord 64 of upper panel 54 is secured in openings or eyelets 67 of panels 34, 53. The openings register with each other so that panel 54 is stretched taut. Panel 32 is stretched taut because its cords are secured to pegs 110c. Panel 52 is held in place by panel 54 and can be secured by its cord to a opening 67 in panel 34. Array A3 is now that of a two-sided structure which provides shade to a person sitting on bottom panel 36, when the sun is directed in direction D4 at panels 32, 34, 52 and 54.

FIG. 7 shows tent array A4 which is similar to array A2 of FIG. 5 except that panel 36 is now stretched out in a direction opposite from panel 34. Panel 32 overlaps panel 34 and its cords 48 are attached to straps 66. This arrangement is desirable when one person is to sit out in the sun on a covered area of sand while another one or two persons sit in the shade under the tent surrounded in part by panels 32, 34, 52, 54. Pegs 110a' are used to hold panel 36 flat and taut by retaining cords 50. The inside of the tent is shaded when the sunlight is directed in direction D5 at panels 32, 34 while the right end of the tent is open for convenient entrance and exit.

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FIG. 8 shows tent 10 arranged in array A5. In this array, panel 36 is disposed as one part of the peaked top of the tent and is anchored to pegs 110d. The post 35 is located at the peak formed by seam 40, and panel 34 slants down to the sand surface. Ends of rope 44 are secured to ends of arms 90 of the post 35. Seam 38 is at the bottom of the tent and cord 42 is anchored to pegs 110e. Panels 52, 54 overlap panel 34 substantially covering opening 57. Cord 64 of panel 54 is anchored in registering holes or openings 67 of panels 34 and 52. Panel 36 is stretched out horizontally and is anchored by cords 48 to pegs 110f. By this arrangement one person can sit on panel 36 while one or two other persons are inside the tent protected from sun rays approaching from directions D6 or D7.

FIG. 9 shows tent 10 arranged in array A6. This is similar to array A5 and corresponding parts are identically numbered. Pegs 110f are omitted because panel 32 is folded up on panel 34 under overlapped panels 52 and 54. Cords 48 are attached to straps 66. Opening 57 is completely closed. If desired either one or both triangular panels can be let down as shown in arrays A1-A4.

FIGS. 14-16 show another post 35A which is generally similar to post 35 and corresponding parts are identically numbered. In post 35A a further extension 150 is provided on pole 80a. This extension has a tenon 151 at its free upper end. On arms 90A of the assembly are two brace bars 155. Each brace bar as clearly shown in FIG. 17 has one end formed with straight fingers 156 having holes 157 which receive a rivet 158. The rivets 158 pivotally attach the brace bars to arms 90A. The other end of each brace bar has short curved fingers 159 and a semicircular recess 160. These ends 159 of the brace bars engage on top of the ledge 162 defined at the base of tenon 151 when the arms 90A are extended upwardly as shown in FIG. 15. The brace bars hang down at the arms 90A when the arms are lowered as shown in FIG. 14. The brace bars assist abutments 92 of bracket 75 in resisting inwardly directed forces applied by rope or core 42 or 44 which holds the arms in extended position when the tent is set up.

FIGS. 18-20 show another post 35B which is similar to posts 35 and 35A and corresponding parts are identically numbered. A hinge bracket 180 is provided on tenon 151 of post extension 150. This hinge bracket as clearly shown in FIG. 21 has a cylindrical sleeve or collar 182 which fits on the tenon and is held by a rivet 184. Arms 186 extend diametrically outward of the collar and have hinges 188 at their ends. Brace bars 190 are pivotally secured to the hinges. These brace bars end in fingers 192. When post 35B is collapsed as shown in FIG. 17, the brace bars hang down parallel to lowered arms 90. When the arms 90 are raised the brace bars are extended upwardly. The hinge bracket assists abutments 92 of bracket 75 in resisting the inwardly directed forces applied by rope 42 or 44 to the ends of the arms.

FIGS. 23 and 24 show another tent cover 30A which is almost the same as cover 30 except that a flexible transparent plastic window 200 has been set in opening 57. All the tent arrays previously described can be set up with cover 30A. The window 200 will prevent wind and blown sand from entering the tent through opening 57 while admitting sunlight. This construction may be desirable where the tent is used on a beach subject to sudden gusts of wind.

FIG. 10 shows how a collapsed tent 10 can be carried conveniently by a person P on his back. The panels are folded up and rolled in panel 36 which is tied by straps 66. Strap loop 65 serves as a shoulder strap.

What is claimed is:

1. A tent for a sand beach, comprising:

a flexible cover made of sheet material, said material being opaque, said cover having first, second and third rectangular panels joined end-to-end, said panels being of substantially equal width,

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the first panel being shorter than the second and third panels;

a pair of triangular panels each joined at one edge to a different lateral edge of the second panel;

two seams at the two end-to-end joints extending transversely of the panels;

linear fastener members at the seams extending outwardly of opposite lateral edges of the second panel, opposite ends of one of said fastener members being engageable with support means to elevate one of the two seams above the surface of the beach while the other fastener member engages with anchor means embedded in the sand to stretch the second panel taut in an inclined position with respect to the surface of the beach;

said second panel having a rectangular opening to define a window therein,

said opening being almost as long and as wide as the first panel so that the opening is closed when the first panel is folded over the second panel;

first attachment means at outer corners of the first and third panels for engaging said anchor means to hold the first and third panels in a taut condition in flat planes at angles to the second panel; and

second attachment means at outer corners of the triangular panels for engaging said anchor means to hold the triangular panels in a taut condition in vertical planes depending from opposite lateral edges of the second panel.

2. A tent as recited in claim 1, further comprising straps secured to the cover at one of the joints to hold the cover in a rolled up condition, and to engage the attachment means at outer corners of the first panel when the first panel overlays the second panel to close the opening therein.

3. A tent as recited in claim 1, wherein the linear fastener members are cords extending longitudinally through the seams.

4. A tent as recited in claim 1, further comprising means on the second panel for engaging the second attachment means to hold the triangular panels in mutually overlapped position overlaying the second panel and substantially closing said opening.

5. A tent as recited in claim 1, wherein the anchor means are pegs, and wherein said first and second attachment means are flexible cords attachable to the pegs.

6. A tent as recited in claim 1, further comprising a transparent sheet covering said opening in the second panel to transmit light while excluding wind and sand.

7. A tent as recited in claim 1, further comprising a post assembly adapted to serve as said support means, said post assembly comprising:

a central pole having two separable sections;

a generally trapezoidal bracket secured to one end of one pole section;

a pair of straight arms each approximately as long as said one pole section with each arm pivotally secured at one end to a different side of the bracket and having a free opposite end; and

abutments in the bracket having undersides inclined to the axis of the pole and disposed near the pivoted ends of the arms so that the post assembly assumes a Y-shaped configuration when the arms are pivoted upwardly away from the pole until they abut the abutments, whereby the post is held in an axially vertical Y-shaped configuration when the opposite ends of said one linear fastener member are secured to the outer ends respectively of the arms while the other pole section is partially embedded in the sand.

8. A tent as recited in claim 7, further comprising brace bars pivotally attached to the arms of the post assembly with free ends of the brace bars engageable on said one end of the one pole section to assist the abut-

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ments of the bracket in resisting forces in tension applied by said one fastener member when secured to the other ends of the arms.

9. A tent as recited in claim 7, further comprising a hinge bracket secured to said one end of the one pole section above the first named bracket, said hinge bracket having a pair of fixed arms extending outwardly of said one pole section in alignment at opposite sides of said one pole section, and a pair of brace bars hinged to said fixed arms respectively, said brace bars having free ends engageable on the pivotable arms of the post assembly when these arms are elevated to abut said abutments, whereby the brace bars and fixed arms assist the abutments in the bracket in resisting forces in tension applied by said one fastener member when secured to the other ends of the arms.

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10. A tent as recited in claim 7, further comprising a strap loop secured at opposite ends to the cover to serve as a shoulder strap in carrying the tent in a rolled up condition with pole sections taken apart and the entire pole assembly collapsed inside the rolled up cover.

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KENNETH DOWNEY, *Primary Examiner*.