Dec. 31, 1957 R. J. WHITE 2,818,078

BEACH CABANA

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Fig. 1.

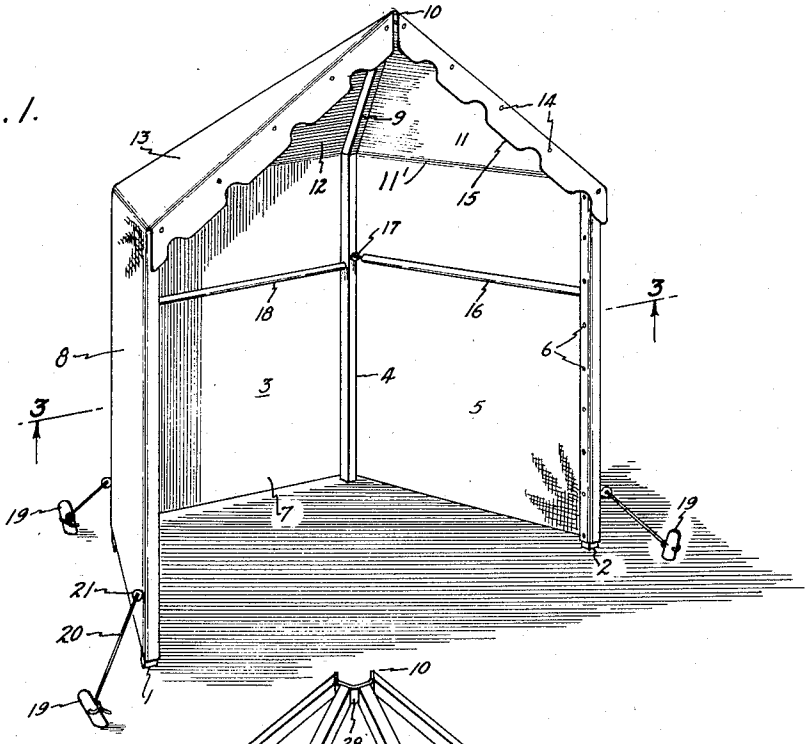
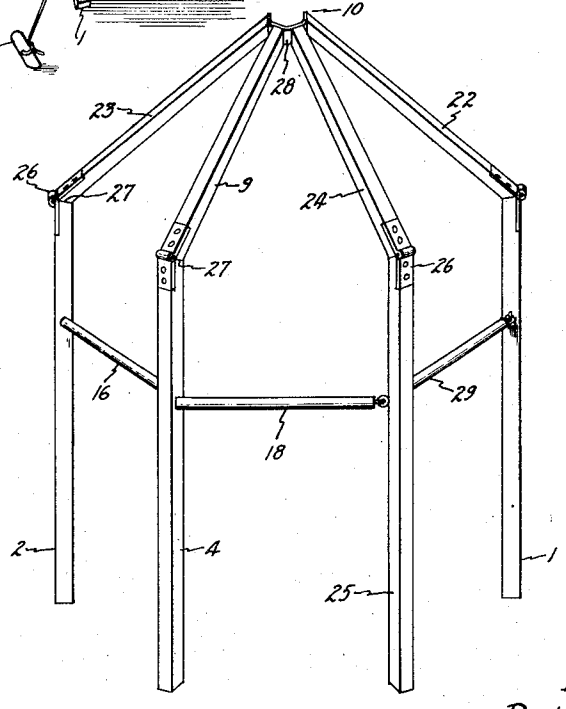


Fig. 2.



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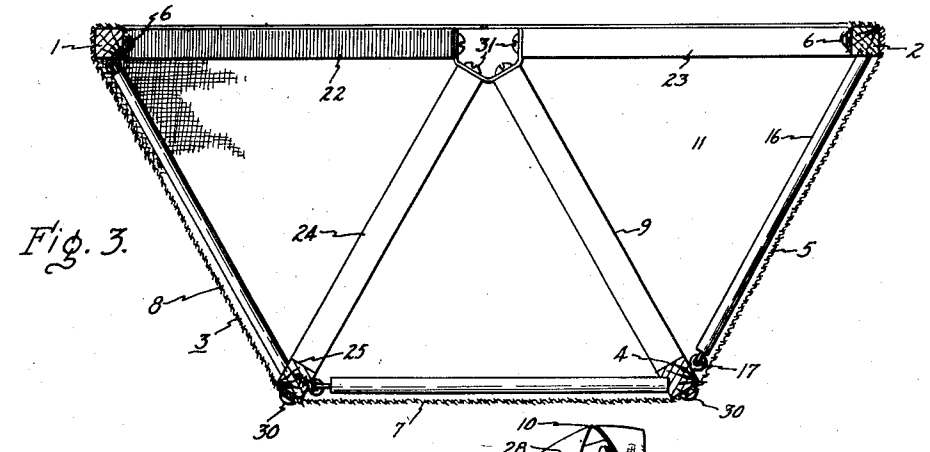

Fig. 3.

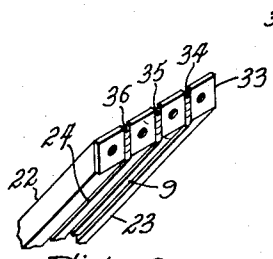

Fig. 6.

Fig. 4.

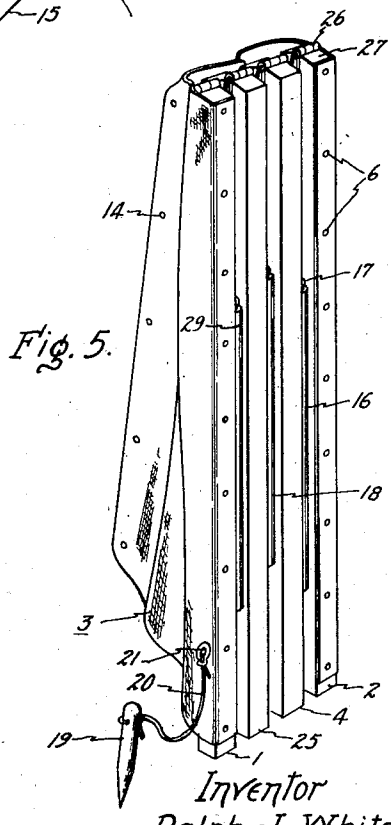

Fig. 5.

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BEACH CABANA

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3 Claims. (Cl. 135—1)

My invention relates to beach cabana and particularly to an open front shelter comprising a framework covered with a flexible sheet material.

An object of the invention is to simplify the construction of beach cabanas, or open front shelters. It is a particular object of my invention to provide a simple and inexpensive shelter which will be light in weight and readily collapsible for transporting, yet rigid and strong when set up for use.

On resort beaches, many surf and sun bathers desire a shelter which will provide shade from the sun as well as protection from the occasional wind or rain on the beach. While at low tides the beach may be several hundred yards wide, a shelter desirably close to the surf must be moved a considerable distance back toward the sand dunes as the tide rises. It is also common for visitors to drive and park automobiles on the beach, and such visitors may wish the convenience of a shelter on the sands. Rental shelters have been provided for bathers, and it is necessary for the rental owner to collect and store such shelters when not in use.

It is, accordingly, an object of my invention to provide a light and rigid shelter which is easily moved from one place to another manually when in erected condition, as up or down a beach, and which may be readily collapsed, such as for transporting in an automobile and for storage in a home closet or basement or on the premises of a cabana rental establishment.

The novel features which are believed to be characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view showing generally the front of a cabana in accord with my invention erected for use;

Fig. 2 is a perspective view of the framework of the cabana taken from the rear;

Fig. 3 is a sectional view of the cabana taken along line 3—3 of Fig. 1 showing details of the construction;

Fig. 4 is a perspective view of the cabana when partially collapsed;

Fig. 5 is a perspective view of the cabana as completely collapsed for carrying or storage; and

Fig. 6 is a perspective view of rafter portions of a cabana, partially broken away, with the cabana partially collapsed, showing a modified multiple hinge arrangement for the rafters.

Referring now to Fig. 1 of the drawings, the erected cabana as used comprises a pair of front stanchions 1 and 2 which are almost completely enclosed within encircling front edge portions of a flexible sheet material wall covering 3. The wall covering, which is of duck or canvas fabric, sheet plastic, or the like, extends between vertical rear corner stanchions, of which only stanchion 4 is seen, and extends from the respective rear corner stanchions generally forwardly and outwardly from each

of the corner stanchions to a respective front stanchion on the same side of the cabana. Thus panel 5 extends from the right hand rear corner stanchion to the right hand front stanchion 2 and the front edge of panel 5 wraps about and is affixed to stanchion 2 by means of pins or brads 6. The stanchions and other frame members are conveniently of lightweight wood, permitting attachment of the wall covering by means of pins or brads. Other frame materials may be used and any desired form of attachment for the wall covering may be selected as appropriate to the materials employed. The wall covering may be attached along the outer side of rear corner stanchion 4 at the rearward edge of panel 5, although such attachment is not essential. It is preferred that the wall covering member 3 be a continuous piece of sheet material comprising rear panel 7 and left hand side panel 8 as well as side panel 5, and each vertical end edge of each panel is preferably attached along the respective stanchion, although if the wall covering member is a continuous piece of sheet material, the rear corner stanchions need not be attached thereto.

A respective roof rafter member is hingedly attached to the upper end of each stanchion, and the four rafters extend generally upwardly and inwardly, the rear corner rafters, such as rafter 9, extending forwardly as well. The upper ends of the rafters are individually joined to a flexible or hinged coupling member at the roof peak 10. The peak 10 will be seen to be in the plane of the front opening of the cabana and to be midway between front stanchions 1 and 2. All four of the stanchions are preferably of the same length, the lower ends preferably rest on the surface of the ground, although if the ground is soft, as with dry beach sand, the ends may embed a short distance into the sand, and the peak 10 is preferably equidistant from the upper ends of the stanchions. Furthermore, each of wall panels 5, 7 and 8 is preferably of the same dimensions, and the angle between rear panel 7 and each of side panels 5 and 8 is preferably 120 degrees. Typically, the stanchions are square in cross section and about 3½ feet long, the wall panels are of nearly the same height as the stanchions but may not extend quite to the lower ends of the stanchions, the wall panels are each about 29 inches wide, the front opening is approximately 5 feet wide, and the peak 10 is about 4 feet, 8 inches above ground level.

A flexible fabric or sheet material roof member or covering is provided which comprises triangular panels 11, 12 and 13. The base or lower edge of each panel is joined to the upper edge of the respective corresponding wall panel, the lower edge of roof panel 11 being joined at 11' along the upper edge of wall panel 5, for example. The roof panels may comprise parts of the same piece of fabric which forms the wall covering, or they may be separately cut and stitched to the wall panels as at 11'. The roof panels are joined to one another along the rear corner rafters. For example, panel 11 and panel 12 are joined along rafter 9.

The front edges of panels 11 and 13 are attached along the respective front roof rafters by means of brads 14, and preferably a decorative fringe or skirt portion 15 of panels 11 and 13 hangs down from the front rafters as shown.

The frame of the cabana when erected is maintained in rigid appropriate form or shape by the cooperative effects of taut wall and roof panels and spreading pressure exerted between stanchions by spreading or separating braces. A stanchion-spreading or stanchion-separating brace 16 is shown, attached by a simple hinge or pivot 17, which may comprise a coupled or linked pair of screw eyes, to stanchion 4, and extending horizontally and parallel to panel 5 to engage in a small socket or depression in stanchion 2. The length of brace 16 is such as to tension panel 5 by separating or spreading stanchions

2 and 4 sufficiently to make panel 5 taut, and this tension, in turn, causes the forward end of the brace 16 to remain engaged in the socket or depression provided in stanchion 2 until forceably collapsed by removal from the depression. A similar collapsible brace 18 is seen in Fig. 1 engaged in a socket or depression in stanchion 4 and tensioning panel 7, and a third brace is provided, as later seen, to tension panel 8. The braces may conveniently comprise wooden dowel rods.

In order to hold the cabana to the ground in windy weather, each stanchion is preferably provided with a peg, such as peg 19, connected permanently to a cord, such as cord 20, which, in turn, is attached to an eye screwed to the stanchion, eye 21 being shown attached to stanchion 1. The pegs function not to support the cabana or to retain its shape, but only to keep the cabana from being blown away or from tipping over.

Fig. 2 shows the arrangement of the frame of the cabana. The front opening is defined between front stanchions 1 and 2 and under front rafters 22 and 23. Each of rafters 22, 24, 9 and 23 is hingedly attached to the upper end of its respective stanchion 1, 25, 4 and 2. Each hinge is preferably mortised into the outer surfaces of the rafter and stanchion as seen, for example, in connection with hinge 26 and rafter 23. Damage to the covering material is thus minimized. The upper end of stanchion 2 abuts the lower end of rafter 23 when the frame is erected, as shown in Fig. 2, and either or both of these ends are beveled to provide the abutting relation at 27 when the angle between stanchion 2 and rafter 23 is approximately 116 degrees, or such other number of degrees as will provide the desired roof pitch. While hinge 26 is arranged to permit the rafter 23 to swing upwardly, and thence over against the back or outer side of stanchion 2, abutment of the ends of the stanchion and rafter at 27 prevents the rafter from swinging from its desired position downwardly toward a horizontal position. Each rafter is attached to its stanchion in the manner just described and the net effect is that each rafter is maintained or supported at the desired angle by the limited action hinge to dispose the peak 10 at the desired elevation above the upper ends of the stanchions.

The upper ends of the rafters are preferably beveled to present vertical or nearly vertical extreme end surfaces and each such upper end is attached to a multiple hinge or coupling member 28. The coupling member is preferably a heavy bendable strap of tough leather, woven fabric webbing or the like. The member 28 should be sufficiently rigid or tough to retain each of the attached upper ends of the rafters at substantially the same height and in proper position with respect to the other ends, thereby affording reinforcement for all of the rafters which, in the case of downward force on one rafter, would distribute the load between all of the rafters and prevent damage to one of the stanchion hinges, such as hinge 26. The member 28 is sufficiently bendable or flexible, however, to permit collapse of the structure, upon removal of braces 16, 18 and 29, by swinging rafter member 23 on hinge 28 until it lies along rafter member 9 and by swinging together members 22 and 24 and members 9 and 24. It will be understood that each section of the strap 28 between each adjacent pair of rafters constitutes a hinge, and if desired, the strap 28 could be replaced, as shown in Fig. 6 with the rafters seen in folded position corresponding to Fig. 4, by a multiple metal hinge arrangement 33 which would have three hinge axes, or hinge pins, each such axis or pin being vertical and one such pin 34 being located between the respective ends of rafters 23 and 9, the second pin 35 being located between the respective ends of rafters 9 and 24 and with the third pin 36 between the respective ends of rafters 24 and 22. The hinge coupling strap 28, though not of metal, in effect constitutes such a hinge insofar as function is concerned.

The bottom sectional view of Fig. 3 clearly shows the arrangement of panel-tensioning or stanchion-separating braces 16, 18, and 29, each of which is attached at one end by means of a pair of interlinked screw eyes or by some other simple hinge device to one of the two stanchions which it is arranged to separate, and is engaged at the other end in a shallow notch or depression which serves as a socket in the other one of the stanchions which it is arranged to separate. Thus brace 16 at its rearward end is hingedly attached to stanchion 4 by means of hinge or pivot 17 and at its forward end is engaged in a shallow socket in front stanchion 2. In this position brace 16 tends to separate stanchions 2 and 4 and tension wall panel 5. The wall member is attached along stanchion 2 by means of a plurality of brads 6, and it may be attached along stanchion 4 by brads 30 if desired.

The inner ends of rafters 23, 9, 24 and 22 are seen to be attached to respective portions of the hinge coupling member 28 by means of respective screws, such as screws 31 which connect rafters 23 and 24 to the member 28.

Fig. 4 is demonstrative of the method of collapsing the cabana. The dowel braces 16, 18 and 29 are first forced from their respective sockets and the pegs 19 removed from the ground. The stanchions and rafters may now be swung together hinging on coupling member 28 in a direction such that the coupling member assumes an approximately straight shape. The cabana will now appear as shown in Fig. 4, with the wall and roof material folded, the braces hanging loosely along their respective stanchions as shown by brace 16 suspended by hinge 17 and hanging alongside stanchion 2, with the pegs 19 hanging loosely from their respective stanchions, and with the rafters extending upwardly and forwardly as supported by the limited action hinges. Since the rafters and stanchions are, in this condition, disposed side by side, the pins of the hinges which join the rafters to the stanchions will now be in alignment. The folding or collapsing is completed by raising the peak 10 and hingedly swinging all of the rafters together in the direction indicated by arrow 32, continuing this swinging action until the rafters swing vertically over the stanchions and thence down against the outer sides of the stanchions as shown in Fig. 5. The cabana as now completely collapsed may be transported as a loose bundle, or, if desired, it may be tied or strapped together by any suitable means, not shown.

Throughout the drawings, the several elements of the structure are identified by like numerals, and it will be understood, in those instances in which a specific description of an identified element is omitted in connection with one figure, that the description thereof previously given is applicable and that the identifying numeral is applied to assist in a comparison of the several figures.

While only certain preferred embodiments of this invention have been shown and described by way of illustration, many modifications will occur to those skilled in the art and it is, therefore, desired that it be understood that it is intended in the appended claims to cover all such modifications as fall within the true spirit and scope of this invention.

What is claimed as new and what it is desired to secure by Letters Patent of the United States is:

1. A beach cabana comprising a pair of spaced apart, vertically upright front stanchions defining therebetween the front opening of the cabana, a pair of front rafter members, a respective hinge attaching each said front rafter member to the upper end of a respective said stanchion, said rafter members extending inwardly and upwardly in the plane of said opening to a peak above the center of said opening, a flexible coupling at said peak and joining the upper ends of said rafter members, a pair of vertical rear corner stanchions spaced apart by a distance less than the width of said opening and disposed behind said opening to define back corners of said cabana, a pair of rear corner rafters, a respective

hinge attaching each said rear corner rafter to the upper end of a respective said rear corner stanchion, each said rear corner rafter extending inwardly, forwardly and upwardly to said peak and being individually joined at said peak to said flexible coupling, a flexible sheet material wall member extending between said two rear corner stanchions and forwardly and outwardly from each said corner stanchion to the respective said front stanchion on the same respective side of the cabana and being attached along its ends to said respective front stanchions, a single respective removable separating brace extending from each said front stanchion to the respective rear corner stanchion on the same side, and a single removable separating brace extending between said rear corner stanchions, said braces being proportioned in length to space said stanchions sufficiently to draw said flexible wall member taut about said stanchions, whereby said wall member maintains said stanchions rigidly in position.

2. A beach cabana comprising a pair of spaced apart, vertically upright front stanchions defining therebetween the front opening of the cabana, a pair of front rafter members, a respective hinge attaching each said front rafter member to the upper end of a respective said stanchion, said rafter members extending inwardly and upwardly in the plane of said opening to a peak above the center of said opening, a flexible coupling at said peak and joining the upper ends of said rafter members, a pair of vertical rear corner stanchions spaced apart by a distance less than the width of said opening and disposed behind said opening to define back corners of said cabana, a pair of rear corner rafters, a respective hinge attaching each said rear corner rafter to the upper end of a respective said rear corner stanchion, each said rear corner rafter extending inwardly, forwardly and upwardly to said peak and being individually joined at said peak to said flexible coupling, a flexible sheet material wall member extending between said two rear corner stanchions and forwardly and outwardly from each said corner stanchion to the respective said front stanchion on the same respective side of the cabana and being attached along its ends to said respective front stanchions, a single respective removable separating brace extending from each said front stanchion to the

respective rear corner stanchion on the same side, a single removable separating brace extending between said rear corner stanchions, said braces being proportioned in length to space said stanchions sufficiently to draw said wall member taut about said stanchions, whereby said wall member maintains said stanchions rigidly in position, and a flexible sheet material roof joined along a front edge to said front rafter members and disposed in covering relation to all of said rafter members and corner rafters and being attached along a lower edge to the upper edge of said wall member.

3. A collapsible beach cabana comprising at least three upright stanchions, a respective rafter for each said stanchion, a respective limited action hinge joining an end of each said rafter to the upper end of its respective said stanchion and arranged to support each rafter in predetermined inwardly and upwardly inclined position and to permit the rafter to be swung upwardly from said position and over the stanchion into a collapsed position along the outer side of the stanchion, each said rafter being attached at its other end to a common multiple hinge, two of said stanchions defining therebetween a front opening for said cabana, a flexible outer wall covering attached at its respective opposite ends to said last mentioned two stanchions respectively, and a plurality of respective collapsible brace members disposed to separate said stanchions one from the next, each said brace member extending generally horizontally between respective adjacent stanchions and each engaging the stanchions between which it is disposed spacedly below the upper edge and above the lower edge of the wall covering and each being proportioned in length to tension the wall covering between its said respective adjacent stanchions, whereby said wall covering is tensioned between said adjacent stanchions throughout the height of said covering.

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