

April 26, 1960

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2,934,076

BEACH CABANA

Filed Feb. 11, 1958

Fig. 1.

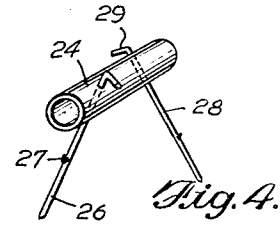
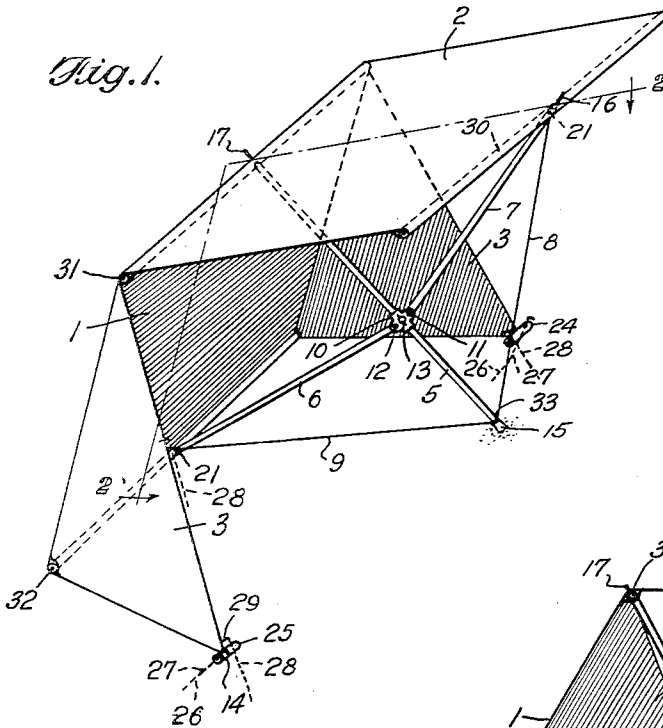


Fig. 4.

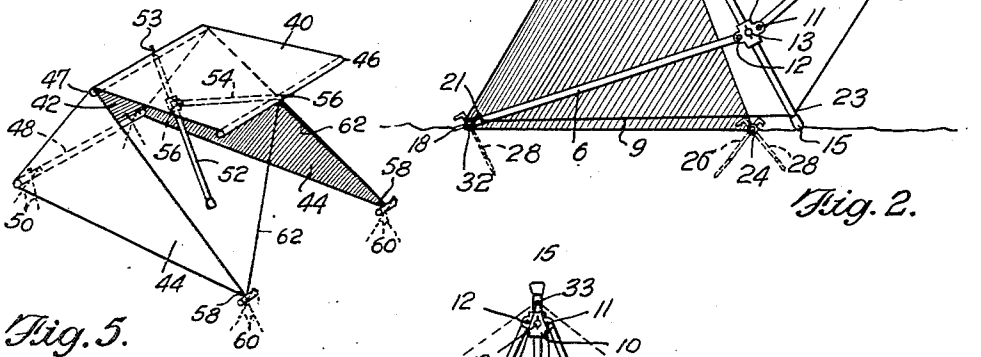


Fig. 2.

Fig. 5.

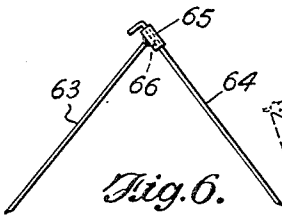


Fig. 6.

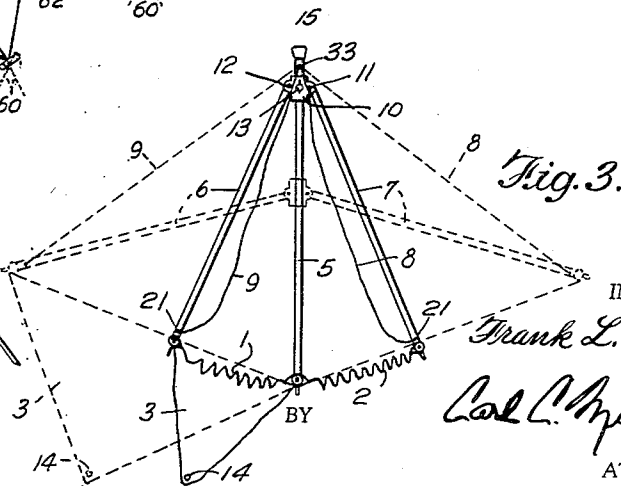


Fig. 3.

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1

2,934,076

BEACH CABANA

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Application February 11, 1958, Serial No. 714,655

8 Claims. (Cl. 135—5)

My invention relates to a portable light weight foldably compact beach cabana adaptable to be quickly erected and secured to loose beach sand for shelter against hot sun or chilling wind.

A primary object of the invention is to provide for quickly and firmly securing the erected cabana to deep and loose beach sand to withstand hard ocean winds without substantially increasing the weight or folded bulk of the cabana by reason of the staking apparatus employed.

A further object is to provide at low cost a personal portable cabana combining largest sheltered area with least folded bulk including staking apparatus, and minimum total weight.

A further object is to devise the cabana structure so that it may be most simply and quickly erected as a rigidly firm structure upon arrival at the beach, together with quick and easy dismantling and compactly folding the structure when ready to leave the beach.

A further object is to devise in the folded cabana dimensional characteristics permitting its mail-order distribution by parcel post, within the limitation of 72 inches combined length and girth, this also enabling it to be carried above rear seat or in trunk of a car.

A further object is to incorporate in the cabana a valuable characteristic of a beach umbrella, in that it may almost instantly put and thereafter maintain its fabric covering in a tightly stretched condition.

A further object is to provide for almost instantly collapsing the cabana structure for lashing it down against the beach and out of the wind in case of a hard squall, or if it be desired to leave it staked down overnight.

A further object is to provide that, if the cabana has been lashed down it may be very quickly returned to erected position with its fabric covering all tightly stretched as before collapsing it.

A further object is to contrive in my compactly foldable cabana a maximum simplicity and rugged strength without weakening or complicating it with hinging devices.

A further object is to provide a rectangular fabric roof extending forwardly of the upper edge of a rearwardly and downwardly sloping backwall, all supported upon three horizontal spaced parallel aluminum tubes, with means including three tubes in a vertical plane, and a wire, for supporting the fabric in a tightly stretched condition.

A still further object is to devise a greatly larger area sheltered against sun and wind by means of lateral fabric extensions of the sloping backwall which add no more weight and folded bulk to the cabana than the bare weight and bulk of the fabric of which such lateral extensions are formed.

Further objects of the invention will appear as the description proceeds.

To the accomplishment of the above and other related objectives, my invention may be embodied in the forms illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illus-

2

trative only, and that various changes may be made in the specific constructions illustrated and described, within the scope of the appended claims. In the description and the claims, for the sake of clarity and coherence, I refer to tubes, wires, and a slidable collar, but it should be understood that the purposes of my invention may optionally be served by substituting equivalent structures, such as wooden rods for tubes, a strong cord or a rod for wire, and a lug slidable in a slot instead of a collar.

Other modifications may become apparent as the description proceeds and from the drawings, wherein:

Fig. 1 is a perspective view of an erected beach cabana embodying the invention;

Fig. 2 is a vertical section taken along the line 2—2 of Fig. 1;

Fig. 3 is a diagrammatic side elevational view of a cabana in an inverted position and partially erected, showing a system for erecting it;

Fig. 4 is a perspective view of an anchor for securing one corner of the cabana;

Fig. 5 is a perspective view of a cabana representing a second embodiment of the invention, and

Fig. 6 is a modification of the anchor shown in Fig. 4.

Essentially my improved cabana comprises a generally rectangular fabric covering rigidly supported by three horizontal and parallel spaced rods or tubes, and a frame for supporting said tubes disposed, when erected, in a vertical plane longitudinally bisecting the tubes, together with a wire which limits the spacing of the tubes while tightly stretching the fabric. The frame may be constructed from a plurality of similar tubes connected together and disposed in a common vertical plane.

In side elevation my cabana has an outline generally trapezoidal, as shown in Fig. 2, in fact in my preferred construction it is a parallelogram, in which the four sides include a fabric roof 2, a sloping fabric backwall 1, a guy wire section 9 lying upon the beach sand, and a front guy wire section 8. Sewed to the opposite side edges of the backwall fabric 1 are lateral substantially triangular sidewall fabric sections 3.

The roof section 2 and the backwall section 1 are sewed together with an overlap which provides a tunnel for accommodating a middle horizontal tube 31 and the rectangular fabric structure thus formed is sewed to form tunnels at its opposite ends for the accommodation of horizontal tubes 30, 32. These three horizontal tubes have bores therethrough centrally of their length, to detachably hold in these bores spikes 16, 17, 18 fastened in the outer extremities of three arms 7, 5, 6 which, when the cabana is erected, are disposed in a common vertical plane that bisects the horizontal tubes 30, 31, 32. Tubular arm 5 may be designated the stem tube and upon it is sleeved a collar 10 which is welded to a plate 11 that is perforated for rivets 12 upon which the arm tubes 7, 6 are swivelly supported. Collar 10 is slidable upon stem 5 and carries a wing screw 13 which may impinge stem 5 to limit motion of the collar, the wing screw being in a nut which is welded to plate 11.

The erection of my cabana is best revealed by Fig. 3, and it will be noted that I have contrived in my cabana the very desirable characteristic of a beach umbrella, of being able to almost instantly put its fabric covering into a tightly stretched condition, without employing any complicated and weakening small hinging devices. The fabric sections 1, 2, are laid down with their outermost sides upon the sand, in other words inverted. Spike 17 of arm 5 is then speared downward through the bore in the middle of tube 31, then spike 16 of arm 7 is speared through tube 30, and spike 18 of arm 6 is speared through tube 32. With the screw 13 loosened, collar 10 is then pushed downward, and the outer ends of arms 6, 7 forced

3

to move outwardly away from stem 5, until the outline shown in the dotted lines of Fig. 3 has been formed. At this time the rectangular covering 1, 2 has straightened out and the guy wire sections 8, 9 have straightened. A further slight forcing downward of collar 10 will then tightly stretch the fabric and the wire simultaneously, until no further movement of collar 10 is possible, whereupon wing screw 13 is tightened. The arms 6, 7 develop a very strong force as they approach, but cannot ever attain axial alignment, since the wire is gaged slightly too short to permit this.

The tightened structure is then flipped over to the position shown in Fig. 1 and is ready for staking down.

Beach sands are notoriously loose and deep, and this is a fundamental reason personal portable cabanas have made very little progress. People continue to fry and blister in the hot sun, or chill after coming out of the water in a wind. The ocean winds are usually brisk and gusty, and to the best of my knowledge the trying problem of how to hold a portable cabana down in beach sands without using large stakes and a mallet to drive them, has never until now been met. Public rented cabanas such as hundreds on the beaches at Ft. Lauderdale, Florida, are permanently staked by large wood stakes drive by mallet, there is no portability. They are contrived with solid steel bows permitting them to be collapsed down to the sand without disturbing their heavy wood stakes. The efficiency of usual stakes, for holding a structure to loose beach sand against dislodgement by wind force, is directly in proportion to their girth and the depth to which they are driven.

In recognition of the problem I have contrived my cabana to meet it. Its total weight, complete with novel staking apparatus is but 11 pounds, its folded bulk complete, only 4 inches thick and 52 inches long, actually mailable parcel post, a very great marketing advantage. I have provided for smooth rapid erection and staking, in about two minutes, or less, and equally quick fold up.

To hold my erected cabana for resisting strong wind I employ seven quarter inch tempered steel wire peg or stake rods about a foot in length, their total weight slightly exceeding one pound, as shown in Fig. 1, and small lugs in the form of aluminum cylinders for co-operation with these wire rods. A wire rod 28 extending through a bore formed in the tube 32 is located at the middle of the tube 32 rather than at an end thereof, since this tube bears full length against the beach sand and therefore it would not be necessary to stake its opposite ends. It should be noted that the angularity of the bore through the tube 32 forces the wire rod 28 to penetrate the beach sand at a sharp angle to vertical, and since the walls of the tube 32 engage the wire rod 28 over a spaced distance, any effort to lift the tube 32 would require sufficient force to pull the wire rod 28 upwardly broadside, and not merely axially upwardly which would be very easy in loose sand. Beach cabanas are normally placed facing the ocean from whence the prevailing wind comes, and in such cases the sloping backwall 1 plus the long forwardly directed bearing of the tight wire 9 against the beach sand, will cooperate to resist any lifting of the tube 32 by wind force from rearward.

Each free apex of the triangular fabric sides 3 is provided with a grommet 14, the fabric in that area being reinforced as with a cord around its edge to prevent the fabric from tearing. The fabric side 3 is pulled tightly forward, outwardly flared, with its lower edge against the beach sand, and a wire rod 26 is pushed angularly into the sand through the grommet 14. The wire rod 26 has sleeved upon it a short aluminum cylinder 25 and it is bent at its upper end at 29 to provide a handle for pushing or pulling the wire, as well as to prevent its pushing down completely through the cylinder 25. About midway of the wire rod 26 a protuberance 27 is provided to prevent the cylinder 25 from sliding off the wire rod 26 and thereby becoming lost. The protuberance 27 also

4

cooperates with the cylinder 25 when the wire is staked into hard clay, or the like, in which the wire rods 26 and 28 cannot and need not be pushed down their full length. The cylinder 25 has closely spaced from the wire 26 another bore at approximately right angles thereto, through which bore wire 28 is shoved angularly into the sand, whereby the wires 26 and 28 form a rigid inverted V, like branching tree roots, and are forcibly so held by the spaced engagement of both wires by the walls of the cylinder 25. Obviously, a wind force upon the erected structure tending to lift grommet 14 would have to cause both wires to cut themselves broadside upwardly through the sand, requiring tremendously greater force than if either or both wires could be moved axially upward.

The guy wire sections 8 and 9 are actually a continuous wire securely fastened at its ends through bores in the outer extremities of the arms 6 and 7 and at its middle through the bore 23 at the bottom of the stem 5 just above the ornamental cap 15, and is preferably brazed to prevent slipping in the bore 23. The section 9 of the wire bears directly upon the sand, and the section 8 thereof extends upwardly therefrom substantially parallel to the fabric backwall 1. Opposite ends of the continuous wire constituting the wire sections 8 and 9 are secured in a pair of bores 21 formed in the outer ends of the arms 6 and 7.

Referring again to Fig. 1, the outer extremities of the arms 6, and 7 and also the stem 5 are each provided with a wood plug (not shown) which may be secured thereto by deforming the tube wall therearound. This plug carries the spike 16 therethrough, the head of which may be straddled by a staple for preventing inward axial movement of the spike. Similarly, wood plugs may reinforce the inner extremities of the arms 6 and 7 where they swivel on the rivets 12.

To quickly dismount and roll up my cabana, all stake wires are first removed, then the structure is flipped over on its back, as shown in Fig. 3. Screw 13 is loosened and the collar 10 is retracted, whereupon the spikes 16, 17 and 18 will pull upwardly out of the tubes 30, 31 and 32. The arms 6 and 7 will lie very closely along the stem 5, as will the wire sections 8 and 9. The triangular fabric sides are then folded over, and the collapsed tubular apparatus and wire rods laid across and rolled up in the rectangular cover portions 1, 2 and the bundle thus formed may be tied by a suitable cord.

It may be very desirable in case of sudden squall, or if employed in considerable number by beach hotels, to collapse the cabana structure to lie down flat on the sand for leaving it on the beach overnight. This I have contrived my apparatus for doing instantly, by merely loosening screw 13 so the collar 10 may drop, and permit front tube 30 and middle tube 31 to fall backward to lie closely over tube 32, whereupon a suitable cord attached to tube 32 may be lashed around spike 16, which will securely hold all the fabric and framework of my cabana flatly down against the sand and out of the wind. Furthermore I have contrived with extreme rapidity for raising up from the collapsed position and again tightening my structure. Front tube 30 need only be pulled upwardly and forwardly, then collar 10 forced upward to tighten the roof section 2, backwall section 1, and the side walls 3, 4 simultaneously with wire sections 8, 9.

Fig. 5 shows a second embodiment of the invention, wherein the structure of the frame for supporting the fabric covering has been simplified. In this embodiment, a generally horizontal fabric roof 40 is integrally joined at its rear edge to a sloping backwall 42 from which a pair of substantially triangular sidewalls 44 extend laterally at an angle thereto, one edge of each of said triangular sidewalls 44 being disposed along and resting on the beach sand or ground. The front edge of the roof 40 is secured to a front horizontal tube 46, the opposite edge of the roof 40 is apertured to receive a middle hor-

horizontal tube 47, and the base of the backwall 42 is joined to a rear horizontal tube 48. The tubes 46, 47 and 48 are parallel to each other, and they correspond to the tubes 30, 31 and 32 of the first embodiment of the invention.

Opposite ends of the rear horizontal tube 48 are staked to the beach sand by a pair of crossed wire rods 50 which extend angularly through suitable slots formed in said tube, the axes of said rods intersecting within the body of tube 48. A central supporting post 52 is stood upon the ground near the center of the interior of the cabana, and this post is inclined rearwardly so that a spike 53 protruding from its upper end may engage the midpoint of the middle horizontal tube 47 at the juncture of the roof 40 with the backwall 42. The front edge of the roof 40 is supported by an inclined tubular arm 54 having protruding spikes 56 at opposite ends thereof for insertion in suitable apertures formed in the front horizontal tube 46 and in the central post 52. The outer corners of the triangular sidewalls 44 are each provided with a grommet 58 through which a pair of wire staking rods 60 are pushed into the loose sand at an angle to each other. The roof 40 and the backwall 42 are drawn taught, and the whole erected structure is strengthened by a stay cord 62, which is disposed in an inverted V-shaped outline extending between the two grommets 58 and looped at its midpoint around the spike 56 on the front edge of the roof 40. Inclined arm 54, stay cord 62, and post 52 are readily removable from the other elements.

In Fig. 6 I illustrate a modification of my anchor apparatus of Fig. 4, in which a wire rod 63 must be first shoved into the sand, and wire rod 64 then manipulated only after rod 63 has been positioned. The rod 63 carries upon its upper end portion an enlarged head 65 which has a bore 66 therethrough, and this bore is sized to closely support an interval of the length of rod 64. The axis of bore 66 is at an angle approaching 90 degrees relative to rod 63 so that when rod 64 is shoved through bore 66 and fully into the sand the head 65 will be the apex of a wide inverted V of which the legs are the pair of rods sharply diverging outwardly as they extend downwardly into the sand, whereby wind force upon the structure cannot possibly move either rod upward axially.

It will be obvious to persons skilled in the art that numerous minor changes may be readily devised without departing from the spirit and scope of the invention.

I claim as my invention:

1. A beach cabana comprising a horizontally disposed rectangular top wall, a rectangular back wall secured to one side edge of the top wall along a meeting rear edge and extending downwardly therefrom to the ground, a plurality of elongated rigid supports secured to and extending horizontally along substantially the entire length of the opposite side edges of said top and back walls including the meeting edge thereof, a central supporting post extending upwardly from the ground to the longitudinal midpoint of the meeting edge of the walls, and a rigid arm having one end connected to said post and having its opposite end secured to the front side edge of the top wall at the longitudinal midpoint thereof for supporting and stretching taut said top wall.

2. The cabana defined by claim 1, wherein the rigid arm is slidably connected to the post for limited longitudinal movement therealong to adjust the stretching tension applied to the top wall, and locking means is provided for securing the arm to the post at selected points therealong.

3. A beach cabana comprising a horizontally disposed rectangular fabric top wall, a rectangular fabric back wall joined integrally to the top wall along a meeting rear edge thereof, said back wall extending from the top wall downwardly to the ground at an acute angle thereto, a plurality of rigid tubes secured to and extending hori-

zontally along substantially the entire length of the opposite side edges of said top and back walls including the meeting rear edge thereof, a central supporting post extending angularly upward from the ground to the longitudinal midpoint of the meeting rear edge of the walls, a rigid arm having one end slidably connected to the post and having its opposite end detachably secured to the front side edge of the top wall at the longitudinal midpoint thereof, and means for securing the arm to the post at selected points to which the arm is slidable therealong, thereby adjustably supporting and stretching taut said top wall.

4. The cabana defined by claim 3, wherein a plurality of guy wires extend between the ground and the front edge of the top wall for maintaining the cabana in an erect stretched condition.

5. A beach cabana comprising a horizontally disposed rectangular top wall, a rectangular back wall secured to one side of the top wall along a meeting rear edge and extending downwardly therefrom to the ground, a plurality of elongated rigid supports secured to and extending horizontally along substantially the entire length of the opposite side edges of said top and back walls including the meeting edge thereof, a central supporting post extending upwardly from the ground to the longitudinal midpoint of the meeting edge of the walls, and a pair of interconnected rigid arms connected at one end thereof to said post and having their opposite ends detachably secured to the front edge of the top wall and to the bottom edge of the back wall at the longitudinal midpoints thereof for supporting and stretching taut said walls.

6. The cabana defined by claim 5, wherein the interconnected rigid arms are slidably connected to the post for limited longitudinal movement therealong, to adjust the stretching tension applied to the walls, and locking means is provided for securing the arms to the post at selected points therealong.

7. A beach cabana comprising a horizontally disposed rectangular fabric top wall, a rectangular fabric back wall joined integrally to the top wall along a meeting rear edge thereof, said back wall extending from the top wall downwardly to the ground at an acute angle thereto, a plurality of rigid tubes secured to and extending horizontally along substantially the entire length of the opposite side edges of said top and back walls including the meeting rear edge thereof, a central supporting post extending angularly upward from the ground to the longitudinal midpoint of the meeting rear edge of the walls, and a pair of rigid arms pivotally secured at one end thereof to a collar slidable longitudinally along the post with the opposite ends of said arms detachably secured to the front side edge of the top wall and to the bottom edge of the back wall at the longitudinal midpoints thereof for supporting and stretching taut said walls.

8. The cabana defined by claim 7, wherein the collar is provided with locking means for securing it to the post at selected points therealong to adjust the stretching tension applied to the walls, and a pair of guy wires extending from the lower end of the post to the outer ends of the arms for preventing the arms from sliding up into longitudinal alignment with each other and for maintaining the cabana in an erect stretched condition.

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