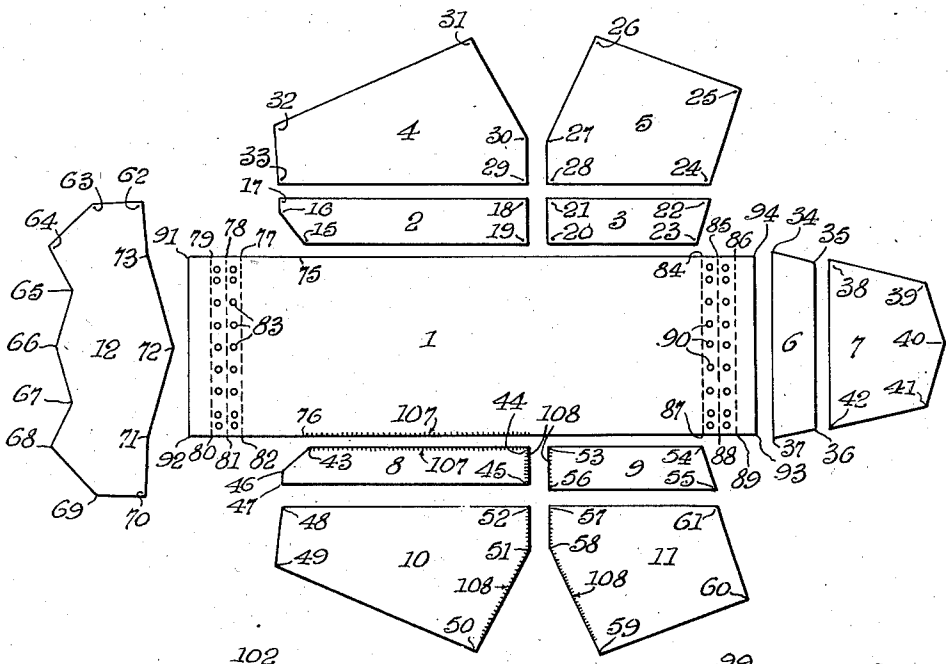
May 15, 1945. C. H. KEARNY 2,375,792

HAMMOCK

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Fig.1.



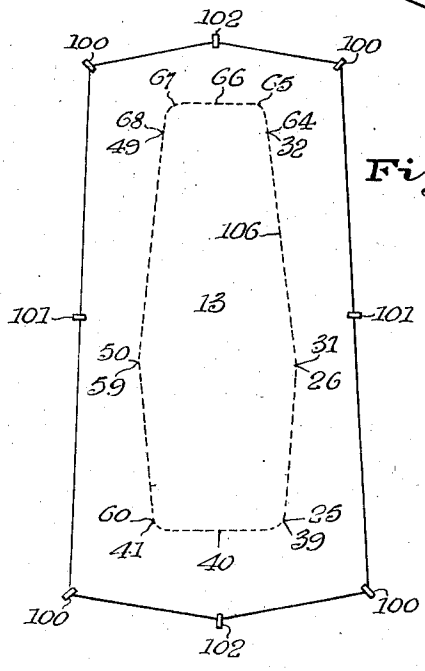


Fig.2.

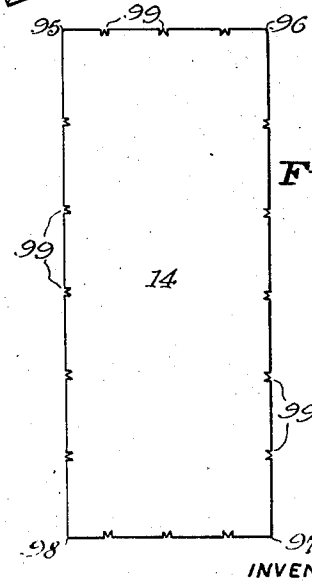


Fig.3.

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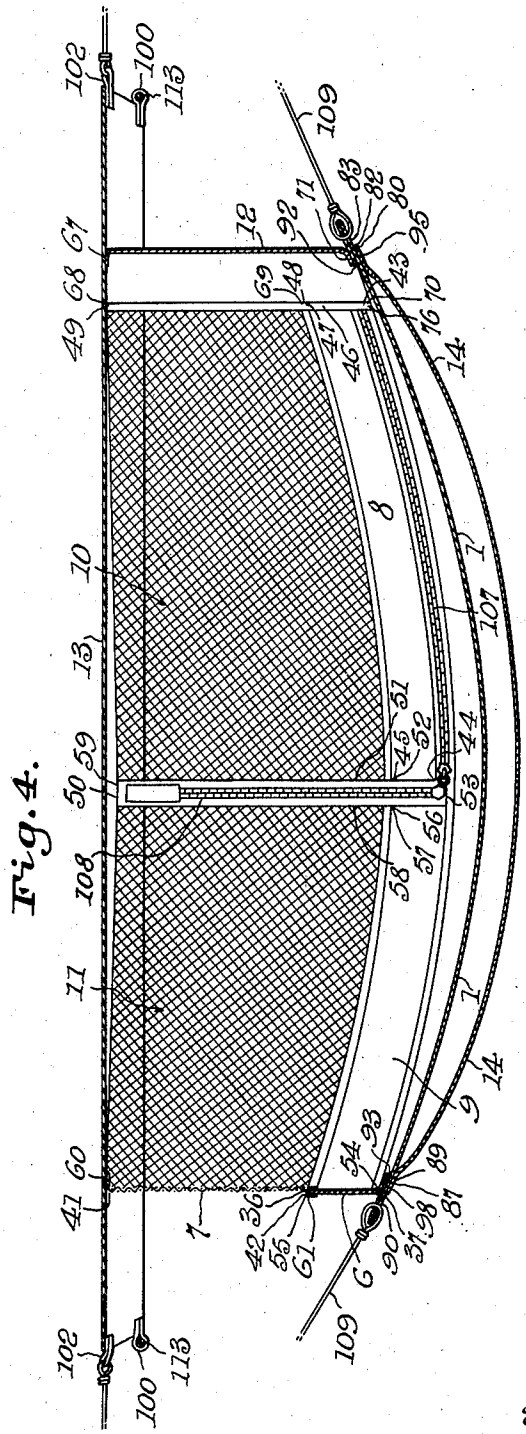


Fig. 4.

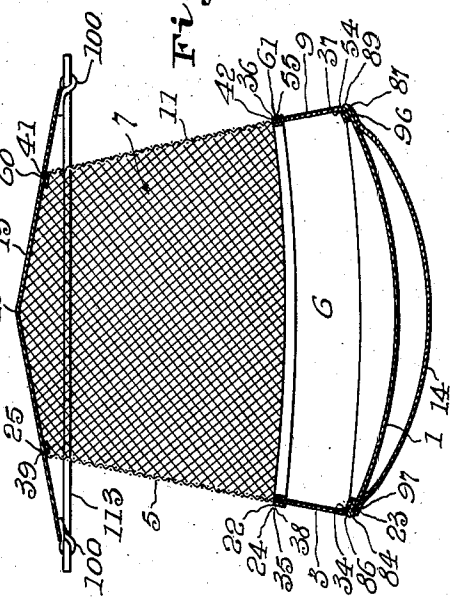


Fig. 5.

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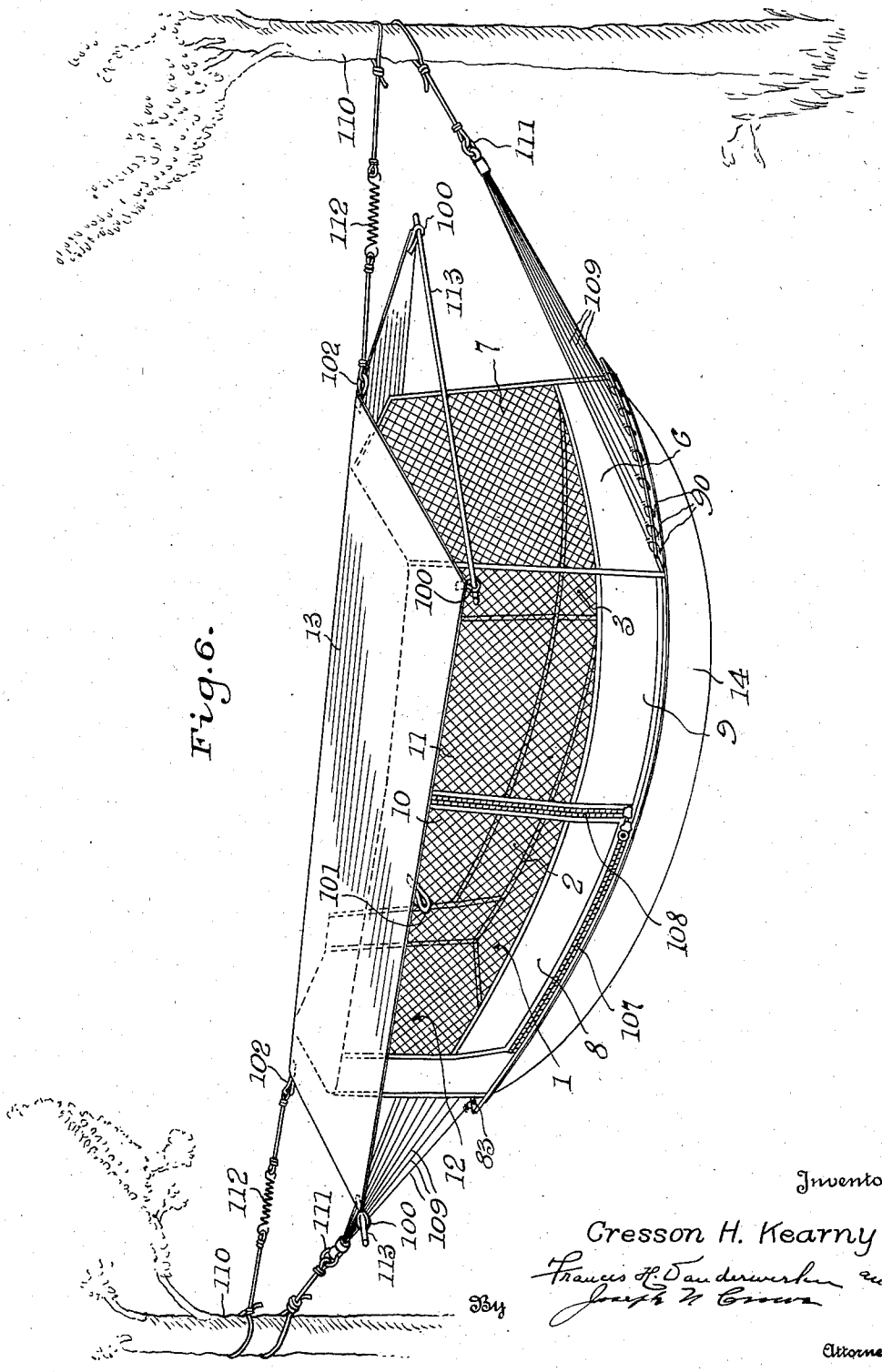


Fig. 6.

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UNITED STATES PATENT OFFICE

2,375,792

HAMMOCK

Cresson H. Kearny, United States Army,
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Application October 19, 1942, Serial No. 462,529

11 Claims. (Cl. 5—121)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without payment to me of any royalty thereon.

This invention relates generally to hammocks for campers or for Army use, and more particularly to canopied hammocks offering complete protection against the elements and insects.

It is an object of this invention to provide a hammock which will offer a light weight arrangement combining the advantages of a tent, a sleeping bag and a mosquito bar, yet in such form taht it will require a minimum of time and equipment for erection.

It is a further object of this invention to provide a device of the character described which will be suitable for general use in both hot and cold climates.

These and other objects and advantages of the invention will become apparent upon a consideration of the following detailed description when taken in conjunction with the accompanying drawings, in which—

Fig. 1 is an exploded view of the elements making up the body of the device;

Fig. 2 is a plan view of the canopy;

Fig. 3 is a plan view of the false bottom of the hammock;

Fig. 4 is a longitudinal cross-section of the body of the hammock;

Fig. 5 is a transverse cross-section of the body of the hammock; and

Fig. 6 is a view in perspective of an embodiment of the invention as set up in the field.

The method of constructing a hammock according to the invention will be clear from a consideration of Figs. 1, 2 and 3. The numeral 1 represents a piece of relatively heavy material such as canvas or duck, from which is formed the bottom supporting member of the hammock. Adjacent the ends of the bottom 1, are placed a series of holes 83 and 90. The ends are then folded along the lines 78—81 and 85—88 respectively bringing the lines 79—80 and 77—82 at one end and the lines 84—87 and 86—89 at the other end into juxtaposition. The folded ends are then sewed along the last mentioned lines leaving tabs 91, 79, 80, 92 and 86, 94, 93, 89 respectively to which the top portion of the device may be sewed, or, if it is desired to provide an added precaution against the possibility of the ends tearing out, they may be sewed to the bottom 1. The double row of holes 83 and 90 will now appear as a single row of holes at each end and they are secured by grommets passing through both layers of the folded ends.

At the foot end of the hammock there is provided the irregularly shaped member 12 made from light weight duck or similar material. This member is sewed to the bottom 1 so that the edges 71—72—73 of the member 12 lie along the line 77—82 of the bottom. The section 73—62 is sewed to the right side of the bottom 1 and will extend approximately to the point 75. Similarly the section 71—70 is sewed along the left side of the bottom 1 and extends to the point 76.

To finish out the right side of the bottom 1 there are provided members 2 and 3 constructed from light weight duck or similar material. The member 2 is irregularly shaped and the edge 15—19 is sewed along the right side starting from the point 75. The end 17—16—15 is sewed to the section 63—62 of the member 12. The edge 20—23 of the member 3 is sewed to the right side of the bottom 1 starting at the point 19. The edges 18—19 and 21—20 of the members 2 and 3 respectively are sewn together.

At the head end, a member 6, also made of light weight duck or similar material, has its edge 34—37 sewed to the bottom 1 along the line 84—87. The edge 34—35 of the member 6 is sewed to the edge 23—22 of the member 3.

A side member 9, constructed from the same material as the prior mentioned side members and corresponding to member 3, has its edge 54—53 sewed to the left side of the bottom 1 starting at the point 87. Its edge 54—55 is sewed to the edge 37—36 of the member 6.

A side member 8, constructed from the same material as the member 9, is arranged to have its edge 43—44 detachably fastened to the left side of the bottom 1, preferably by a zipper 107, starting from the point 76. The edge 43—46—47 of the member 8 is sewed to the section 70—69 of the member 12. The edges 44—45 and 53—56 of the side members 8 and 9, respectively, are arranged to be detachably fastened together, preferably by means of zipper 108.

From the construction thus far described, it will be seen that there has been provided a strong supporting hammock bottom 1 having grommeted openings 83 and 90 at either end to which supporting cords may be attached and having trough-like sides of solid, but light weight material formed by the members 2, 3, 6, 8, 9 and 12. The depth of the sides is preferably 4 to 8 inches.

Along the right side of the hammock there are provided irregularly shaped members 4 and 5 of mosquito netting. The member 5 has its edge

28—24 sewed to the edge 21—22 of the member 3 and its edge 26—27—28 sewed to the edge 31—30—29 of the member 4. The member 4 has its edge 33—29 sewed to the edge 17—18 of the member 2 and its edge 32—33 sewed to the edge 64—63 of the end member 12.

Similarly, along the left side of the hammock there are provided irregularly shaped members 10 and 11 of mosquito netting. The member 11 has its edge 57—61 sewed to the edge 56—55 of the member 9 and its edge 57—58—59 detachably attached, preferably by a continuation of the zipper 108, to the edge 52—51—50 of the member 10. The member 10 has its edge 48—52 sewed to the edge 47—45 of the member 8 and its edge 48—49 sewed to the edge 69—68 of the end member 12.

At the head end there is provided member 7 of mosquito netting having its edge 38—42 sewed to the edge 35—36 of member 6, the edge 38—39 sewed to the edge 24—25 of member 5 and the edge 42—41 sewed to the edge 61—60 of member 11.

From the construction thus described, and due to the irregular shape of the side and end members, it will be seen that the top edges of the side members will, when the bottom 1 of the hammock assumes the shape taken when an individual is supported thereon, form substantially horizontal lines having their centers at somewhat greater spacing than at the ends, while the bottom edges of the sides will form catenaries. Similarly, the end members, due to their shaping, will, under the same conditions, form, at the top edge, an inverted V, while their bottom edges will also form catenaries. It will also be noted that the edges 64—65 and 67—68 of the member 12 will form a portion of the top edges of the right and left sides respectively of the hammock. This will be apparent from a consideration of Figs. 4 and 5 in which the points of attachment of the various members corresponding to those just described have been indicated in order to simplify the understanding of their arrangement.

Referring to Fig. 2 the construction and attachment of the canopy 13 will be clear. The top edges of the side and end members are sewn to the under side of the canopy 13 along the dotted line 106. The points marked out along this line represent approximately where the corresponding points of the top edges of the side and end members will lie. At each corner of the canopy 13 there are provided looped tabs 100 through which a spacing member, as will be described later, may be placed. Looped tabs 102 are placed at the center of each end and, if desired, similar looped tabs 101 may be placed on either side. The function of these loops will be described later.

Experience has shown that when ordinary cots or hammocks of usual construction are used for sleeping in cold weather, it is necessary to have as much bed clothing underneath as on top of the sleeper. This is because of the fact that, with any movement at all of the surrounding air, the air which has been heated by body warmth is rapidly displaced by cold air resulting in a continual loss of body heat.

In order to prevent this occurrence and, consequently, halving the number of required blankets, I provide a false bottom 14 to my hammock. This false bottom is sewed to the edges of the true bottom but, as will appear from a comparison of Figs. 1 and 3, is of greater overall dimensions. Referring to these two figures the construction and method of attaching the false bottom 14 to the hammock will be clear. The corners 95, 96, 97 and 98 are attached to the under side of the true bottom 1 at points 82, 77, 84 and 87 respectively. Cut out portions 99 placed at intervals along the edges of the false bottom 14 allow the slack to be taken up as the edges are sewed to the bottom 1. The false bottom 14 is of sufficient oversize to give a spacing between it and the bottom 1 of approximately 2 or 3 inches. This spacing will confine the air within it which will be heated by the body and act as an insulating buffer between the body and the surrounding cold air.

In addition to this function, the false bottom, in conjunction with the lower side walls, provides a barrier through which insects and small reptiles will not be able to bite the sleeper.

The arrangement for supporting my improved hammock will be clear from a consideration of Fig. 6. The hammock is strung up as usual between the supports 110 by means of supporting cords 109 passing through the grommeted openings 83 and 90 and to common rings 111. A line is then attached from each of the center end tabs 102 of the canopy to the supports. Preferably the canopy lines are elastic or are provided with springs 112 so that, should the support cords 109 break, the hammock will not be torn as the bottom falls. Spacing members 113 are passed through the corner loops 100 of the canopy to form an A-type roof. The spacing members 113 may be made of any convenient material and by varying their length the angle of the canopy can be adjusted to any desirable degree. From the center side tabs 101 and the corner tabs 100, guys may be staked out to prevent the wind from upsetting the canopy in stormy weather.

While I have described my invention solely for use as a canopied hammock, it is clear that it is equally suited for use as a sleeping bag or as a ground tent. When used as a ground tent the line across the center tabs 101 forms the ridge and the slack taken up by the sides to form the curved bottom of the hammock is used to permit the formation of an apex along this line. In order to insure weather tightness, all members, with the exception of the netting are waterproofed, and all seams waxed after sewing.

While I have described a single embodiment of my invention, it is to be understood that I do not wish to be limited to the particular details and assemblies illustrated since various modifications within the spirit of the invention will suggest themselves to those skilled in the art.

Having described my invention, what I claim as new and wish to secure by Letters Patent is:

1. A device of the character described comprising, in combination, a canopy supported at opposite ends and including a central ridge, spreader members mounted on the ends of said canopy, and holding the sides thereof in spaced relation, a hammock, means for supporting the hammock at its ends in spaced relation to the canopy, said hammock including side edges, end and side members provided with netting portions and including upper and lower edges, said upper and lower edges of said end members secured to the hammock and canopy adjacent to opposite ends thereof and to said side members, the lower edges of the side members secured to opposite side edges of the hammock and said upper edges of the side members secured at their ends to said canopy and extending longitudinally in spaced relation on opposite sides of said ridge and said

lower edges of the end and side members shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

2. A device of the character described comprising, in combination, a canopy supported at opposite ends and including a central ridge, spreader members mounted on the ends of said canopy and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, irregularly shaped end and side members provided with netting portions and including lower and upper edges, said upper and lower edges of the end members secured to the hammock and canopy adjacent to opposite ends thereof and to said side members, said lower edges of the side members secured to opposite side edges of the hammock, and said upper edges thereof secured at their ends to the canopy and extending in spaced relation on opposite sides of said ridge, a false bottom provided on said hammock, said lower edges of the end and side members shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

3. A device of the character described comprising, in combination, a canopy including a central ridge, means for supporting the canopy, spreader members mounted on ends of said canopy and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, end and side members provided with netting portions and including lower and upper edges, said lower and upper edges of the end members secured adjacent to opposite ends of the hammock and canopy and to said side members, said side members including connected sections, said lower edges of the side members secured to opposite side edges of the hammock and said upper edges of the side members secured at their ends to the canopy and extending in spaced relation on opposite sides of said ridge adjacent to outer longitudinal edges of the canopy, certain of said sections on a side member detachably connected together and to said hammock, and said lower edges of the end and side members shaped to form substantially catenary-like curvatures at the ends and longitudinal side edges of the hammock when the hammock is occupied whereby any strain in occupying the hammock is equally distributed over the entire device.

4. A device of the character described comprising, in combination, a longitudinally extending canopy supported at opposite ends and including a longitudinal central ridge, spreader members mounted on the ends of said canopy holding the sides thereof in spaced relation, a longitudinally extending hammock, irregularly shaped end and side members including lower and upper edges, said end members including joined sections secured adjacent to opposite ends of the hammock and canopy and to said side members, certain of said joined sections of the end members formed of netting, said lower edges of the side members secured to opposite longitudinal side edges of the hammock and said upper edges of the side members secured at their ends to the canopy and extending longitudinally in spaced relation out of contact with the canopy on opposite sides of said ridge, said lower edges of the end and side members shaped to form substantially catenary-like curvatures at the ends and longitudinal side edges of the hammock and said upper edges of the side members shaped to contact with said canopy when the hammock is occupied whereby any strain in occupying the hammock is equally distributed over the entire device.

5. A device of the character described having, in combination, a hammock supported at its ends and comprising a longitudinally extending bottom supporting member, end attaching means, supporting cords connected to the end attaching means, irregularly shaped foot, head and side members having ends and upper and lower edges, said foot member including an inverted V-shaped portion on its upper edge and a V-shaped portion on its lower edge and said upper edge of the head member having an inverted V-shape, said V-shaped portion on the lower edge of said foot member secured to the bottom supporting member adjacent to one of its ends and the lower edge of said head member secured to the bottom supporting member adjacent to another end thereof, said lower edges of the side members secured to opposite longitudinal side edges of the bottom supporting member and said ends of the foot and head members secured to the ends of said side members, a longitudinally extending canopy supported at its ends above said hammock and secured to the inverted V-shaped portion on the upper edge of the foot member and the inverted V-shaped upper edge of the head member and to the ends of the upper edges of the side members, spreader members mounted on the ends of said canopy and holding the sides thereof in spaced relation, said canopy including a longitudinal central ridge and having a greater length and width than said hammock whereby the canopy extends outwardly from the longitudinal edges of the hammock, foot, head and side members, said upper edges of the side members extending longitudinally in spaced relation on opposite sides of said ridge and said lower edges of the foot, head and side members adapted to form substantially catenary-like curvatures at the ends and longitudinal side edges of the hammock upon the hammock being occupied whereby any strain in occupying the hammock is equally distributed over the device.

6. A device of the character described having, in combination, a hammock supported at its ends and comprising a longitudinally extending bottom supporting member, end attaching means, supporting cords connected to the end attaching means, end and side members, said end and side members having ends and lower and upper edges, said lower edges of the end members secured to the bottom supporting member adjacent to opposite ends thereof, said lower edges of the side members secured to opposite longitudinal side edges of the bottom supporting member and said ends of the end members secured to the ends of the side members, a longitudinally extending canopy supported at its ends above said hammock and secured to the upper edges of the end members and to ends of the upper edges of the side members, said canopy including a longitudinal central ridge and having a greater length and width than said bottom supporting member whereby the canopy extends outwardly from the end and side members, spreader members mounted on the ends of said canopy and holding the sides thereof in spaced relation, said upper edges of the side members extending longitudinally in spaced relation on opposite sides of said ridge and shaped to be out of contact with said

canopy when the hammock is unoccupied and to become rectilinear for contacting with said canopy upon the hammock being occupied and said lower edges of the end and side members shaped to form substantially catenary-like curvatures on the ends and longitudinal side edges of the bottom supporting member upon the hammock being occupied whereby any strain is equally distributed over the entire device.

7. A combined canopy and hammock assembly comprising, in combination, a canopy, means supporting the ends of the canopy, spreader means mounted on the canopy at the ends thereof and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, side and end members including netting portions and having upper, lower and side edges, said members being united along their side edges and attached at their upper edges to said canopy, said lower edges of said members attached to said hammock and shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

8. A combined canopy and hammock assembly comprising, in combination, a canopy provided with a centrally extending ridge, means supporting the ends of the canopy, spreader means mounted on the canopy at the ends thereof and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, side and end members including netting portions and having upper, lower and side edges, said members being united along their side edges and attached at their upper edges to said canopy, said lower edges of said members attached to the ends and side edges of said hammock and shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

9. A canopy and hammock assembly combined in a unitary, flexible structure and comprising, in combination, a canopy, means supporting the ends of the canopy, spreader means mounted on the canopy at the ends thereof and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, side and end members including netting portions and having upper, lower and side edges and end members having upper, lower and side edges, said members being united along their side edges to said canopy and attached at their lower edges to said hammock, said end members being shaped to allow their upper edges to conform to the shape of the canopy and said side members being shaped to allow their upper edges to form horizontal lines, said lower edges of said side and end members shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

10. A canopy and hammock assembly combined in a unitary, flexible structure and comprising, in combination, a canopy provided with a centrally extending ridge, means supporting the canopy at its opposite ends in the line of said ridge, spreader means mounted on the canopy at the ends thereof and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, side and end members including netting portions and having upper, lower and side edges, said members being united along their side edges and attached at their upper edges to said canopy, said lower edges of said members shaped to form substantially catenary-like curvatures at the ends and side edges of said hammock when the hammock is occupied whereby any strain is equally distributed over the entire device.

11. A canopy and hammock assembly combined in a unitary, flexible structure and comprising, in combination, a canopy provided with a centrally extending ridge, means supporting the canopy at its opposite ends in the line of said ridge, spreader means mounted on the canopy at the ends thereof and holding the sides thereof in spaced relation, a hammock, means supporting the hammock in spaced relation to the canopy, said hammock including side edges, side and end members including netting portions and having upper, lower and side edges, said members being united along their side edges and attached at their upper edges to said canopy, said lower edges of said members shaped to form substantially catenary-like curvatures at the ends and side edges of the hammock when the hammock is occupied whereby any strain is equally distributed over the entire device, and slide fastening means in connection with one of said side members to afford access to the interior of said hammock.

CRESSON H. KEARNY.