ABSTRACT

A shelter construction shelters users and vehicular or vehicular-sized gear. The shelter construction comprises a central canopy assembly and one or more laterally-situated collapsible/expandable enclosures. The central canopy assembly comprises a canopy and canopy-elevating structure. The canopy comprises an outer canopy surface, an inner canopy surface, longitudinally-opposed gates, and at least one set of laterally opposed portholes. The gates and portholes let users and gear therethrough. The enclosure(s) are attached to the outer canopy surface adjacent the portholes for enclosing users and gear as let through the portholes. The enclosures each comprise a roof section, a floor section, a wall section, and enclosure-elevating structure. The floor and wall sections are sized and shaped to as to enable a novel method of erecting the shelter construction and for maintaining the enclosures in a neat, compact assemblage when in a collapsed state.
SHELTER CONSTRUCTION AND METHOD OF ERECTING SAME

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention
[0002] The present invention generally relates to a portable shelter construction, and more particularly, to a shelter construction for sheltering both users and gear, which gear may include a personal riding vehicle, and one or more people.

[0003] 2. Description of the Prior Art
[0004] As noted in U.S. Pat. No. 5,313,972, which issued to Goldberg, the prior art is replete with portable tent constructions for people or for equipment and machinery. Only a few such structures are designed to not only provide shelter for a person but also enclose or incorporate a personal riding vehicle within the structure. Some of the more pertinent prior art relating to shelters and/or tent constructions for sheltering users and/or gear and the like is described hereinafter.

[0005] U.S. Pat. No. 1,622,435 (‘435 patent), which issued to Fraizee, discloses a Tourist’s Auto Tent. The subject matter of the ‘435 patent relates to tents of a type that are designed for tourists’ purposes when camping when on a tour in which connection a tent that has merits for such camping purposes must provide in its structure the elements that will enable the tourist to enjoy comforts and conveniences as well as quick and easy means of setting up and taking down and folding up and packing such tents.

[0006] U.S. Pat. No. 2,480,509 (‘509 patent), which issued to Ripley, discloses a Vehicle-Supported Tent. The ‘509 patent teaches a tent for attachment to a vehicle, comprising top and end walls of flexible material having means detachably engageable with fixed parts at one side of the vehicle, said walls adapted to be extended over the vehicle and laterally beyond the opposite side thereof, supporting structure for the latter portions of said tent walls and means adapted to be interposed between the vehicle and ground surface and connected with said supporting structure, to rigidly anchor said structure by the weight of the vehicle and the tent walls.

[0007] U.S. Pat. No. 2,826,210 (‘210 patent), which issued to Heil, discloses a Trailer Tent Frame. The ‘210 patent teaches a foldable tent frame comprising an above ground support, a bow unit foldably mounted at its lower end on the support and including a bow which, when the frame is unfolded, extends at an upward and outward incline from the support, a second bow extending outwardly from the upper end of the first named bow means pivoting the second bow at its inner end to the upper end of the first named bow for folding the same against a third bow extending downwardly from the outer end of the second bow, the second bow including transversely spaced legs and a cross bar connecting the same at their outer ends, the third bow having corresponding legs formed with inwardly and upwardly inclined tips, and means pivoting said tips at their upper ends to the legs of the second bow adjacent but short of the cross bar whereby the third bow is foldable against the under side of the second bow; said tips being in a position such that the same abut the cross bar as a stop when the third bow is in a substantially vertical, foldable position.

[0008] U.S. Pat. No. 4,114,633 (‘633 patent), which issued to Herbez, discloses a Camping Tent for Motorcycles and Cyclists. The ‘633 patent teaches a tent that serves both as a sleeping unit and as a shelter for a two-wheeled vehicle such as a bicycle or motor-cycle is designed in the form of a penthouse mounted against one of the sides of the vehicle. A vertical wall extends alongside the vehicle and the double roof of the tent is designed to cover the vehicle so as to form an awning on the other side of this latter or to extend downwards along the side opposite to the tent.

[0009] U.S. Pat. No. 4,848,386 (‘386 patent), which issued to Cooper, discloses a Small Vehicle Garage. The ‘386 patent teaches a top flexible rectangular shaped sheet shelter for motorcycle, moped, bicycle or the like narrow profile vehicle from the weather elements. The protective rectangular shaped sheet has an opposed pair of sheet lengths and an opposed pair of sheet sides. A first linear rod wall mount, equivalent to the length of a parked motorcycle, moped, bicycle or the like profile vehicle is secured on the exterior wall of a house, recreational vehicle (RV), a standard motor vehicle garage, fence or the like. The detachable wall mount can have a simple sheet element which can be a film cover of plastic sheet, or an alternatively spring loaded roller shade sheet, disposed on a tube-like container. The sheet shelter element can be a foldable plastic film sheet or a waterproof woven fabric tarpaulin cover sheet, forming a tent-type protective structure against the climatic elements of rain, snow and hail. Separate first and second pivotal support rod elements are each singly disposed at the two opposed terminal ends of the length of plastic or tarpaulin sheet, and are pivotally connected to a third ridge pole rod element extending the length of the tarpaulin sheet. The third ridge pole is connected at opposed second two support rod terminals to the first two pivotal rod elements, forming a U-supporting frame for the flexible tarpaulin sheet which covers the motorcycle or the other narrow width vehicles. A fourth rod element is disposed and secured to the tarpaulin sheet opposed length at the second edge length opposed to the tarpaulin edge length secured to the exterior wall of a house, RV or the like. The weight of the fourth rod, when draped over the third cross rod, secures the tarpaulin in a protective sloped tent type cover over the vehicle. Second and third plastic sheets or tarpaulin covers can be connected by zipper, velcro, or grommet and button fastenings to the top shelter cover sides, providing complete cover for the narrow profile vehicle.

[0010] U.S. Pat. No. 4,944,321 (‘321 patent), which issued to Moyard-Ortiz, discloses a Portable Vehicle Garage and Tent Structure. The ‘321 patent teaches a combination portable vehicle garage and tent structure incorporating support members which in the garage mode are retained under the wheels of the vehicle which support members have a framework of support poles and cross members with a cover to shelter the vehicle which structure, when a vehicle is not positioned therein, can be utilized as a tent.

[0011] U.S. Pat. No. 5,313,972 (‘972 patent), which issued to Goldberg, discloses a Tent Assembly for Vehicles and People. The ‘972 patent teaches a tent assembly for sheltering a personal riding vehicle and one or more people that is lightweight, compact and easy to set up is disclosed. The tent assembly comprises a floor section having one side secured to the ground along side a parked vehicle and extending away from the vehicle, a wall section connected to the side of the floor section farthest from the vehicle and a roof section extending from the top of the wall section over the floor section and over the vehicle. The roof section is secured to either the vehicle or to the ground on the opposite side of the vehicle from the floor section and is supported at one side by the wall and at an intermediate portion by the vehicle. Storm flaps may be connected to either end of the roof section. The
storm flaps extend down to the floor section and can be secured to the floor section, wall section and vehicle, to further enclose and protect the inside of the tent assembly.

U.S. Pat. No. 6,349,732 (‘732 patent), which issued to Cooper, discloses a Collapsible Small Vehicle Enclosure. The ‘732 patent teaches a collapsible enclosure that generally comprises a symmetrical pair of base members and a pliable protective cover supported by a plurality of internal frame members pivotally connected on the axis of the hinge points for the base members. By manually rotating the first frame member about its axis, the protective cover and additional frame members unfurl over the base members and surround a vehicle or object in a shell-shaped enclosure. To store or transport the enclosure, the protective cover and frame members collapse in an accordion-like fashion and sandwich between the folded base members.

U.S. Pat. No. 6,439,645 (‘645 patent), which issued to Pederson, discloses a Mobile All-Terrain Vehicle Enclosure. The ‘645 patent teaches an enclosure for mounting to an all-terrain vehicle (ATV). The enclosure includes a first canopy bracket mountable to a front rack of the ATV and a second canopy bracket mountable to a rear rack of the ATV. A frame comprising a plurality of support members is pivotally attached to the first canopy bracket and the second canopy bracket. The plurality of support members pivot around the canopy brackets between a collapsed position and an open position. A cover is positioned over the frame such that when the frame is in the collapsed position the cover is folded and when the frame is in the open position the cover is open.

It may be seen from an inspection of the foregoing art, as well as from a consideration of the state of the art generally, that the prior art does not disclose a user/gear sheltering construction having gate-defining tie lines bordering an open floor central canopy assembly in combination with one or more laterally-situated, expandable closed floor enclosures, which enclosures may be tethered to a supporting ground surface for fixing the axis of the central canopy assembly. Further, the prior art appears to be silent on a certain methodology for erecting a shelter whereby the roof sections of laterally-situated and expandable enclosures are pivotable about a roof-to-canopy junction while coextensive floor and wall sections are reassemble from a hung position and unfoldable about a floor-to-wall junction for forming a room-enclosing enclosure. The prior art thus perceives a need for such a shelter construction and method of erecting the same, as set forth in more detail hereinafter.

SUMMARY OF THE INVENTION

The shelter construction according to the present invention provides a shelter for both a personal riding vehicle, such as an all terrain vehicle, a motorcycle, a snow mobile or similar other vehicle or vehicular-sized gear, and one or more people. The shelter construction thus provides a temporary garage-like structure with personal occupancy quarters laterally attached or situated relative to the garage-like structure. The shelter construction is easy to assemble and is compact when folded and not in use.

The shelter construction according to the present invention provides shelter for both users and gear, and comprises a central canopy assembly and one or more laterally-situated enclosures. The central canopy assembly comprises a canopy, certain canopy-elevating means for elevating the canopy above a ground surface, and a longitudinal canopy axis about which the canopy may be raised or elevated.

The canopy comprises an outer canopy surface, an inner canopy surface, longitudinally-opposed gates, and at least one set of laterally-situated portholes. The gates and portholes essentially function to let users and gear traverse intermediate space(s) defined by the inner and outer canopy surfaces. The gates each comprise a gate-defining tie member, which tie members extend intermediate laterally-opposed portions of the gates at the ground surface.

The laterally-situated enclosure(s) is/are attached to the outer canopy surface adjacent the portholes for enclosing the users and gear as let through the portholes. The enclosures each comprise a roof section, a floor section, a wall section extending intermediate the roof and floor sections, and certain enclosure-elevating means for elevating the roof and wall sections above the ground surface. The floor section(s) function to blanket portions of the ground surface in lateral adjacency to the central canopy assembly.

The wall sections each comprise a far wall section and longitudinally-opposed near wall sections. The near wall sections extend intermediate and connect the far wall section and the outer canopy surface. The far wall sections each comprise a substantially uniform floor-to-roof section height and the floor sections each comprise a substantially uniform far wall-to-canopy section width, the section height of the far wall sections and the section width of the floor sections are substantially equal in magnitude. The roof sections each comprise a canopy-to-far wall section length, and are attached to the outer canopy surface at a roof attachment zone or pivot junction. The preferred distance intermediate the roof attachment zone and the ground surface is no less than the section lengths of the roof section(s).

The enclosures are each collapsible against the outer canopy surface such that the respective coextensive floor sections and far wall sections are foldable upon one another, which folded assembly has a length that is lesser in magnitude than the roof section length. The roof section length thus functions to sandwich and concealing the wall and floor sections against the outer canopy surface.

Certain section-hanging means are further incorporated for hanging the coextensive floor and wall sections when in a collapsed state. In this regard, the floor and far wall sections are joined at a section boundary, which section boundary is cooperable with the section-hanging means for coextensively hanging the floor and far wall sections intermediate the roof section and outer canopy surface when the enclosures are in a collapsed state.

When two laterally-opposed enclosures are incorporated into the design, the enclosure-elevating means further function to impart laterally and downwardly directed tensile forces on the canopy via the roof sections thereby fixing the canopy axis, and obviating the need for additional staking of the central canopy assembly.

Other objects of the present invention, as well as particular features, elements, and advantages thereof, will be elucidated or become apparent from, the following description and the accompanying drawing figures.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features of our invention will become more evident from a consideration of the following brief description of patent drawings:

FIG. No. 1 is an axial end view of a first preferred embodiment of the shelter construction according to the present invention showing a phantom all-terrain vehicle
parked under a central canopy assembly and laterally-opposed enclosures extending from the central canopy assembly in a fully expanded state, said enclosures being tethered to the ground surface via guy-wire like lines.

FIG. No. 2 is a side plan view of the first preferred embodiment of the shelter construction according to the present invention showing a laterally-situated enclosure in a collapsed state with a lower right corner of the enclosure in a raised position to depict otherwise hidden structure.

FIG. No. 2(a) is an enlarged fragmentary view of the lower right corner of the enclosure otherwise depicted in FIG. No. 2 to more clearly depict a zipper mechanism for zipper attaching the roof section to the outer canopy surface when in a collapsed state.

FIG. No. 3 is a first sequential axial end view of the first preferred embodiment of the shelter construction according to the present invention showing laterally-opposed enclosures extending from the central canopy assembly in a nearly fully collapsed state with phantom lines demarcating the fully expanded state.

FIG. No. 4 is a second sequential axial end view of the first preferred embodiment of the shelter construction otherwise shown in FIG. No. 3 showing the laterally-opposed enclosures extending from the central canopy assembly in a partially expanded state with phantom lines demarcating the fully expanded state.

FIG. No. 5 is a third sequential axial end view of the first preferred embodiment of the shelter construction otherwise shown in FIG. No. 4 showing the laterally-opposed enclosures extending from the central canopy assembly in a fully expanded state and tethered to the ground surface via guy-wire like lines.

FIG. No. 6 is an axial end view of a second preferred embodiment of the shelter construction according to the present invention showing a phantom all-terrain vehicle parked under a central canopy assembly.

FIG. No. 7 is a first sequential axial end view of the second preferred embodiment of the shelter construction according to the present invention showing a laterally-situated enclosure extending from the central canopy assembly in a nearly fully collapsed state with phantom lines demarcating the fully expanded state.

FIG. No. 8 is a second sequential axial end view of the second preferred embodiment of the shelter construction otherwise shown in FIG. No. 7 showing the laterally-situated enclosure extending from the central canopy assembly in a partially expanded state with phantom lines demarcating the fully expanded state.

FIG. No. 9 is a third sequential axial end view of the second preferred embodiment of the shelter construction otherwise shown in FIG. No. 8 showing the laterally-situated enclosure extending from the central canopy assembly in a fully expanded state and tethered to the ground surface via a guy-wire like line.

FIG. No. 10 is an enlarged, fragmentary side view of a laterally-situated enclosure according to the present invention in a partially expanded state showing a floor section unfolding from a wall section of substantially equal length.

FIG. No. 11 is an enlarged, fragmentary side view of a laterally-situated enclosure according to the present invention in a fully expanded state showing a floor section and a wall section of substantially equal length, the roof section being maintained in an elevated state via pole and guy-wire like structure.

FIG. No. 12 is a fragmentary, perspective, diagrammatic, first sequential type depiction of an enclosure according to the present invention being expanded from a collapsed state.

FIG. No. 13 is a fragmentary, perspective, diagrammatic, second sequential type depiction of the structure otherwise shown in FIG. No. 12 being expanded from a collapsed state.

FIG. No. 14 is a fragmentary, perspective, diagrammatic, third sequential type depiction of the structure otherwise shown in FIG. No. 13 in a fully expanded state.

FIG. No. 15 is an axial perspective view of the first preferred embodiment of the shelter construction according to the present invention showing an open floor and longitudinally-opposed vehicle-letting gates.

FIG. No. 16 is an enlarged fragmentary depiction of a single hook-loop junction whereby the floor section and wall section of the enclosure is hung in an elevated position intermediate the roof section and canopy when in a collapsed state.

FIG. No. 17 is a fragmentary perspective type depiction of the first preferred embodiment of the shelter construction according to the present invention showing a laterally-situated enclosure in a fully expanded and tethered state with open portholes enabling ingress/egress to/from the enclosure via the central canopy assembly.

FIG. No. 18 is a plan view of the porthole structures for enabling ingress/egress to/from a laterally-situated enclosure of the shelter construction as viewed from underneath the central canopy assembly, the left porthole being in a closed state to show a mesh screen and the right porthole being in an open state to show the floor section as hung when in a collapsed state.

FIG. No. 19 is a dual depiction showing (1) an assembled, expanded form of the enclosure as exploded from a central canopy assembly outfitted with a roof section of the enclosure, and (2) an exploded form of the enclosure as exploded from the central canopy assembly outfitted with a roof section of the enclosure.

FIG. No. 20 is a top perspective type depiction showing a laterally-situated enclosure expanded from the central canopy assembly.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

Referring now to the drawings with more specificity, a first preferred embodiment of the present invention concerns a shelter construction as illustrated and referenced at 10 in FIG. Nos. 1-5, 15, 17, and 19. A second preferred embodiment of the present invention 20 is illustrated and referenced in FIG. Nos. 6-9. It is contemplated that both shelter construction 10 and shelter construction 20 may well function to shelter users and gear, which gear may include relatively large vehicles and the like. In this last regard, it is contemplated that the shelter construction(s) 10 and 20 of the present invention may well be used to shelter relatively large, all-terrain type vehicles, motorcycles, snow-mobiles, etc. It is further contemplated that the shelter constructions may be utilized to provide cover for cleaning fish and game, it being noted that a central canopy assembly of the shelter construction has an open bottom for allowing waste materials from the game/fish to be discarded upon the ground surface instead of collecting upon a floor structure.
In any event, a generic ATV is believed to be an exemplary type of vehicle used for camping, hunting, fishing activities and the like and, as such, has been generically depicted and referenced in FIG. Nos. 1 and 6 at reference numeral 11. The ATV 11 has been depicted to show the relative structural relationship of the shelter constructions 10 and 20 relative to the size and type of gear that may be stowed within the central canopy assembly 12 of each construction 10 and 20. From an inspection of the noted figures, it may be readily understood that the primary function of the shelter constructions 10 and 20 is to provide a garage-like shelter for vehicles and the like. Vehicles may thus be driven into the shelter construction 10 or 20 via longitudinally-aligned gates as at 13 in FIG. Nos. 1, 2, 4-6, 8, 9, 15, and 17.

The vehicle or gear-letting gates 13 are formed in a canopy material such that the mouth of the gate 13 is defined, in part, by strap-like, relatively non-elastic tie members 14, which extend across the inferior or bottom portions of the gates 13 to otherwise limit the expansion of opposing bottom sides of the gate 13. It is contemplated that the strap-like tie members 14 may be of such construction so as to easily allow vehicles and the like to pass thereover. In this regard, it is contemplated that nylon straps or similar other strap-like material may define the tie members 14. The gate-defining tie members 14 are specifically illustrated and referenced in FIG. Nos. 1, 15, and 17.

The shelter construction 10 preferably comprises a central canopy assembly 12 and laterally-opposed enclosures 15 attached to the central canopy assembly 12 as generally depicted in FIG. Nos. 1, and 3-5. The central canopy assembly 12 comprises a canopy 16 and certain canopy-elevating means for elevating the canopy 16 above a ground surface 100. It is contemplated that the canopy 16 may be preferably constructed from a fabric material as selected from an exemplary fabric listing of nylon, rip-stop nylon, polyester, cotton canvas, polyethylene, and UV-Tex 5.

The canopy-elevating means may be preferably defined by a series of state of the art flexible poles 17 cooperable with a series of state of the art pole-receiving sleeves 18 and state of the art pole-receiving hooks or clips 19 attached to the canopy 16. The poles 17 may be constructed from tubes of fiberglass typically with an external diameter less than about 1 cm (1/2 inch). For ease of transportation, these poles 17 may be made in sections some 30 cm to 60 cm long (1 to 2 ft), with one end of each section having a socket into which the next section can fit.

For ease of assembly, the sections for each pole 17 are often connected by an internal elastic cord (not specifically illustrated) running the entire length of the pole 17. The ground-engaging ends of the poles 17 are cooperable with pole-receiving structure or loops 50 attached to the inferior portions of the canopy 16 as generally illustrated and referenced in FIG. Nos. 19 and 20. It is believed that the heretofore described pole mechanisms are well known in the art, and no further description thereof is necessary to practice the invention as understood by those skilled in the relevant arts.

The canopy 16 may be elevated about a longitudinal canopy axis 101 as referenced in FIG. Nos. 2 and 19. The canopy 16 comprises an outer canopy surface 21 as generally referenced in FIG. Nos. 1-11, 15, 17, and 19; and an inner canopy surface 22 as generally referenced in FIG. Nos. 15-18. In addition to the longitudinally-opposed gates 13, the canopy 16 further comprises laterally-opposed portholes 23 as illustrated and referenced in FIG. Nos. 17-19. It is contemplated that the gates 13 and portholes 23 essentially function to let users and gear traverse intermediate space defined by the inner and outer canopy surfaces 22 and 21.

The laterally-opposed enclosures 15 of shelter Fig. Nos. 1-17, 16-19, and 25 as illustrated and referenced in FIG. Nos. 4, 5, 7-14, and 16-19; a floor section 25 as illustrated and referenced in FIG. Nos. 4, 5, 7-14, and 16-19; and a (three-piece) wall section 26 as illustrated and referenced in FIG. Nos. 1, 4, 5, 7-14, 16, 17, and 19. Notably, the roof sections 24 and the outer canopy surface 21 may comprise a zipper mechanism as at 51 for zipper attaching the roof sections 24 to the outer canopy surface 21 or canopy 16 when the enclosures 15 are in a collapsed state. The zipper mechanism(s) 52 are referenced in FIG. Nos. 2, 2(a), 14, and 19.

As may be seen from an inspection of the noted figures, the wall section 26 extends intermediate the roof and floor sections 24 and 25. Further, the enclosures 15 may be said to comprise certain enclosure-elevating means for elevating the roof and wall sections 24 and 26 above the ground surface 100. The floor or ground section 25 essentially functions to blanket portions of the ground surface 100 in lateral adjacency to the central canopy assembly 12. The wall sections 26 may be said to each preferably comprise a far wall section 27 and longitudinally-opposed near wall sections 28 as further illustrated and referenced in exploded form in FIG. No. 19.

The laterally-opposed enclosure-elevating means of the enclosures 15 may be preferably defined by a guy-wire or guy-ropes structure 40 in cooperation with certain rods or poles 41 as illustrated and referenced in FIG. Nos. 1, 15, and 17. The structures 40 may be staked as at 42 as further illustrated in the noted figures. The enclosure-elevating means as defined thus essentially function to impart laterally and downwardly directed tensile forces as at vector arrows 105 to the attendant structure. In this regard, it may be readily understood from an inspection of the relevant figures that tensile forces extend through the canopy 16 via the roof sections 24 such that the enclosure-elevating means may well further function to fix the canopy axis 101, thus obviating the need to separately stake the canopy assembly 12 to the ground surface 100.

The near wall sections 28 extend intermediate the far wall section 27 and the outer canopy surface 21, and may comprise doors, windows, or other similar structure 29 for enabling venting or ingress/egress at the election of the manufacturer. It is contemplated that the portholes 23 and the structure(s) 29 may be outfitted with door/window structure, which structure(s) may be zipper-attached to the surrounding media so as to enable the user to selectively open/close the structure. In this regard, it is contemplated that an outer window flap may be outfitted with a window zipper as at 32. A mesh screen may also be included and zipper attached to the letting aperture of the porthole or doorway so as to enable screened venting or ingress/egress at the election of the manufacturer. Similarly, the gates 13 may be outfitted with doors/ windows 30. FIG. Nos. 1, 5, 6, 9, 15, and 17 show the door/window 30 in a fully rolled or furled state (having been unzipped) at the borders 31; FIG. Nos. 3, 7, and 19 show the door/window 30 in a fully extended state; and FIG. Nos. 4 and 8 show the window/door 30 in a partially rolled/furled state.
The foregoing door/window mechanisms are believed to be state of the art in the tent/shelter construction industry and no further description thereof is deemed necessary for the purposes of this specification.

[0057] The far wall sections 27 each preferably comprise a substantially uniform, fully expanded or unfolded floor-to-roof section height as may be generally seen from an inspection of FIG. No. 11 at 102; and the floor sections 25 each preferably comprise a substantially uniform, fully expanded or unfolded far wall-to-canopy section width as at 103 in FIG. No. 11. The height 102 and width 103 are preferably equal or substantially equal in magnitude. The floor section(s) 25 are attached to the far wall section(s) 27 at a seam or junction 35 as referenced in FIG. Nos. 12-14, and 16. When folded about the floor-to-wall junction 35 as generally depicted in the noted figures, the opposing sections 25 and 27 are coextensiv e. It is contemplated that the junction 35 may be outfitted with certain section-hanging means for hanging the floor and wall sections 25 and 27 at the section boundary or junction 35 as generally depicted in FIG. Nos. 16 and 18.

[0058] It is contemplated that the section-hanging means may be defined by a series of hook and loop assemblies, whereby each assembly comprises a hook as at 36 and a loop 37 as illustrated and referenced in FIG. Nos. 16 and 18, or cooperative snap structures 38 as generally depicted in FIG. Nos. 12-14. Thus, the section boundary or junction 35 is coextensive with the section-hanging means for coextensively hanging the floor and far wall sections 25 and 27 intermediate the roof section 24 and outer canopy surface 21 when the enclosures 15 are in a collapsed state as generally depicted in FIG. Nos. 2, 6, 15, and 18.

[0059] In this last regard, it should be noted that the roof section 24 preferably comprises a fully expanded canopy-to-far wall section length as generally referenced at 104 in FIG. No. 11. The roof section 24 is preferably attached to the outer canopy surface 21 at a roof attachment zone or junction 39 the distance intermediate the roof attachment zone and the ground surface of the canopy when in an elevated state is no less than the section length 104. In other words, the roof section length 104 is substantially equal to (or slightly less than) the distance intermediate the roof attachment zone 39 and the ground surface such that when the enclosures 15 are in a collapsed state, the roof section 24 completely conceals the enclosed enclosure 15 and is coextensive with the outer canopy surface (as bound or defined by the zone 39 and the ground surface 100), and creates the appearance of a uniform outer canopy surface as generally depicted in FIG. No. 2.

[0060] The enclosures 15 are thus each collapsible against the outer canopy surface 21 and portholes 23 such that the width 103 of the floor section(s) 25 and the height 102 of the far wall section(s) 27 are coextensively foldable upon one another, but lesser in magnitude than the roof section length 104. The roof section length 104 thus sandwiches and conceals the wall and floor sections 27 and 25 against the outer canopy surface 21. The section-hanging means hang the floor and wall sections 25 and 27 at the section boundary or junction 35.

[0061] It is contemplated that the shelter construction 20 of the present invention is substantially identical to the shelter construction 20 and for a reduction in overall size relative to construction 10 and the removal of an enclosure 15. In other words, whereas construction 20 comprises laterally-opposed enclosures 15, the construction 20 comprises a single laterally-situated enclosure 15. Thus, the shelter construction 20 also functions to shelter users and gear, and comprises a central canopy assembly 12 and a laterally-attached enclosure 15.

[0062] The central canopy assembly 12 comprises a canopy 16, certain canopy-elevating means for elevating the canopy 16 above a ground surface 100, and a longitudinal canopy axis 101. The canopy 16 comprises an outer canopy surface 21, an inner canopy surface 22, longitudinally-opposed gates 13, and at least one laterally-situated porthole 23. The gates 13 and porthole 23 let users and gear traverse intermediate space defined by the inner and outer canopy surfaces 22 and 21.

[0063] The laterally-attached enclosure 15 is attached to the outer canopy surface 21 adjacent the porthole 23 for enclosing users and gear as let through the porthole 23. To achieve this essential function, the enclosure 15 comprises a roof section 24, a floor section 25, a wall section 26 extending intermediate the roof and floor sections 24 and 25, and certain enclosure-elevating means for elevating the roof and wall sections 24 and 26 above the ground surface 100. The floor section 25 essentially functions to blanket portions of the ground surface 100 in lateral adjacency to the central canopy assembly 12.

[0064] While the above description contains much specificity, this specificity should not be construed as limitations on the scope of the invention, but rather as an exemplification of the invention. For example, as is described hereinabove, it is contemplated that the present invention essentially discloses a shelter construction having an open bottom central canopy assembly 12 and at least one laterally-situated enclosure. A porthole enables ingress/egress to/from the enclosure via the canopy assembly. The sections of the enclosure as sized and shaped so as to uniquely define an enclosure expanding ad enclosure collapsing process. In this regard, it is thus contemplated that the foregoing teachings further support certain shelter-erecting methodology.

[0065] The shelter erecting method or method of erecting the shelter construction according to the present invention may thus be said to comprise a series of steps including the initial step of elevating a central canopy assembly 12 about a longitudinal canopy axis 101. As may be gleaned from the foregoing, the longitudinally-opposed gates 13 to the canopy assembly 12 may be defined, at least in part, via ground-located tie members 14 while or after elevating the canopy assembly 12.

[0066] After the canopy assembly is elevated or otherwise raised, the laterally-opposed room-enclosing roof sections 24 may be pivoted from a collapsed position to an expanded position about a roof-to-canopy junction (as at 106) parallel to the canopy axis 101 as generally and sequentially depicted in FIG. Nos. 3-5 and FIG. Nos. 7-9. While or after pivoting the roof sections from a collapsed state to an expanded state, the coextensive room-enclosing wall and floor sections 27 and 25 may be unfolded to expand the enclosure 15. The unfolding action of the wall and floor sections 27 and 25 operates to form, or enable ingress/egress via the user-gear letting portholes 23.

[0067] Finally, after unfolding the wall and floor sections 27 and 25, the roof section may be maintained in the expanded state via the enclosure-elevating means. Before unfolding the wall and floor sections 27 and 25, the wall and floor sections 27 and 25 may be released from a hanging position via the section-hanging means. It is contemplated that the folding and unfolding action of the wall and floor sections 27 and 25, substantially as described herein, functions to maintain the
integrity of the shelter construction insofar as the sections 26, 27, and are not otherwise damaged by packing or crumpling the material into the space intermediate the canopy 16 and the roof section 24. Rather, a neat fold line coaxial with the junction 35 (reinforced via stitching) operates to provide a robust means for collapsing and expanding the enclosures 15 as may be required.

Although the invention has been described by reference to several preferred embodiments and certain methodology, it is not intended that the novel shelter construction and method of erecting the same be limited thereby, but that modifications thereof are intended to be included as falling within the broad scope and spirit of the foregoing disclosure and the appended drawings.

I claim:

1. A shelter construction, the shelter construction for sheltering users and gear, the shelter construction comprising: a central canopy assembly, the central canopy assembly comprising a canopy, canopy-elevating means for elevating the canopy above a ground surface, and a longitudinal canopy axis, the canopy comprising an outer canopy surface, an inner canopy surface, longitudinally-opposed gates, and laterally-opposed portholes, the gates and portholes for letting users and gear traverse intermediate space defined by the inner and outer canopy surfaces, the gates each comprising a gate-defining tie member, the tie members extending intermediate laterally-opposed portions of the gates at the ground surface; and
laterally-opposed enclosures, the enclosures being attached to the outer canopy surface adjacent the portholes for enclosing users and gear as let through the portholes, the enclosures each comprising a roof section, a floor section, a wall section extending intermediate the roof and floor sections, and enclosure-elevating means for elevating the roof and wall sections above the ground surface, the floor section for blanketing portions of the ground surface in lateral adjacency to the central canopy assembly.

2. The shelter construction of claim 1 wherein the wall sections each comprise a far wall section and longitudinally-opposed near wall sections, the near wall sections extending intermediate the far wall section and the outer canopy surface.

3. The shelter construction of claim 2 wherein the far wall sections each comprise a substantially uniform floor-to-roof section height and the floor sections each comprise a substantially uniform far wall-to-section width, the section height and section width being substantially equal in magnitude.

4. The shelter construction of claim 3 wherein the roof section comprises a canopy-to-far wall roof section length, the roof section being attached to the outer canopy surface at a roof attachment junction, the distance intermediate the roof attachment junction and the ground surface being no less than the roof section length.

5. The shelter construction of claim 4 wherein the enclosures are each collapsible against the outer canopy surface, the floor sections and far wall sections being foldable upon one another such that the section height and section width are coextensive and lesser in magnitude than the roof section length, the roof section length for sandwiching and concealing the wall and floor sections against the outer canopy surface.

6. The shelter construction of claim 5 wherein the roof sections and the outer canopy surface comprise cooperative zipper mechanisms, the zipper mechanisms enabling users to zipper attach the roof sections to the outer canopy surface when the enclosures are in a collapsed state.

7. The shelter construction of claim 6 comprising section-hanging means for hanging the floor and wall sections, the floor and far wall sections being joined at a section boundary, said section boundary being cooperable with the section-hanging means for coextensively hanging the floor and far wall sections intermediate the roof section and outer canopy surface when the enclosures are in a collapsed state.

8. The shelter construction of claim 1 wherein the enclosure-elevating means function to impart laterally and downwardly directed tensile forces on the canopy via the roof sections, the enclosure-elevating means thus for fixing the canopy axis.

9. A shelter construction, the shelter construction for sheltering users and gear, the shelter construction comprising: a central canopy assembly, the central canopy assembly comprising a canopy, canopy-elevating means for elevating the canopy above a ground surface, and a longitudinal canopy axis, the canopy comprising an outer canopy surface, an inner canopy surface, longitudinally-opposed gates, and a laterally-situated porthole, the gates and porthole for letting users and gear traverse intermediate space defined by the inner and outer canopy surfaces; and

a laterally-attached enclosure, the enclosure being attached to the outer canopy surface adjacent the porthole for enclosing users and gear as let through the porthole, the enclosure comprising a roof section, a floor section, a wall section extending intermediate the roof and floor sections, and enclosure-elevating means for elevating the roof and wall sections above the ground surface, the floor section for blanketing portions of the ground surface in lateral adjacency to the central canopy assembly.

10. The shelter construction of claim 9 wherein the enclosure is collapsible against the outer canopy surface such that the roof section and canopy sandwich the floor and wall sections therebetween thereby camouflaging the enclosure.

11. The shelter construction of claim 10 wherein the roof section and outer canopy surface comprise a cooperative zipper mechanism, the zipper mechanism enabling users to zipper attach the roof section to the outer canopy surface for enhancing enclosure camouflage.

12. The shelter construction of claim 9 wherein the gates each comprising a gate-defining tie member, the tie members extending intermediate laterally-opposed portions of the gates at the ground surface.

13. The shelter construction of claim 12 wherein the wall section comprises a far wall section and longitudinally-opposed near wall sections, the near wall sections extending intermediate the far wall section and the outer canopy surface.

14. The shelter construction of claim 13 wherein the far wall section comprises a substantially uniform floor-to-roof section height and the floor section comprises a substantially uniform far wall-to-canopy section width, the section height and section width being substantially equal in magnitude.

15. The shelter construction of claim 14 wherein the roof section comprises a canopy-to-far wall roof section length, the roof section being attached to the outer canopy surface at
a roof attachment junction, the distance intermediate the roof attachment junction and the ground surface being no less than the roof section length.

16. The shelter construction of claim 15 wherein the enclosure is collapsible against the outer canopy surface, the floor section and far wall section being foldable upon one another such that the section height and section width are coextensive and lesser in magnitude than the roof section length, the roof section length for sandwiching and concealing the wall and floor sections against the outer canopy surface.

17. The shelter construction of claim 16 comprising section-hanging means for hanging the floor and wall sections, the floor and far wall sections being joined at a section boundary, said section boundary being coextensible with the section-hanging means for coextensively hanging the floor and far wall sections intermediate the roof section and outer canopy surface when the enclosures are in a collapsed state.

18. The shelter construction of claim 9 comprising laterally-opposed enclosures, the enclosures each comprising enclosure-elevating means for imparting laterally and downwardly directed tensile forces on the canopy via roof sections of the enclosures, the enclosure-elevating means thus for fixing the canopy axis.

19. A shelter-erecting method, the shelter-erecting method comprising the steps of:
   elevating a central canopy assembly about a longitudinal canopy axis;
   defining longitudinally-opposed gates to the canopy assembly via ground-located tie members;
   pivoting laterally-opposed room-enclosing roof sections from a collapsed position to an expanded position about a roof-to-canopy junction parallel to the canopy axis;
   pivoting coextensive room-enclosing wall and floor sections about a floor-to-wall junction while pivoting the room-enclosing roof sections;
   forming user-gear letting portholes via pivoting action of the wall and floor sections; and
   maintaining the roof sections in the expanded position.

20. The shelter-erecting method of claim 19 comprising the step of releasing the wall and floor sections from a hanging position before pivoting the far wall and floor sections.

21. The shelter-erecting method of claim 20 wherein the step of maintaining the roof sections in the expanded position fixes the longitudinal canopy axis.

22. A shelter-erecting method, the shelter-erecting method comprising the steps of:
   elevating a central canopy assembly about a longitudinal canopy axis;
   laterally raising a first roof section from a collapsed position to an expanded position;
   unfolding wall and floor sections while raising the first room-enclosing roof section; and
   maintaining the first roof section in the expanded position.

23. The shelter-erecting method of claim 21 comprising the step of forming user-gear letting portholes while unfolding the far wall and floor sections.

24. The shelter-erecting method of claim 22 comprising the step of unzipping the first roof section from the canopy assembly before laterally raising the first roof section.

25. The shelter-erecting method of claim 22 comprising the step of defining longitudinally-opposed gates to the canopy assembly via ground-located tie members while elevating the central canopy assembly.

26. The shelter-erecting method of claim 22 comprising the step of releasing the wall and floor sections from a hanging position before unfolding the wall and floor sections.

27. The shelter-erecting method of claim 22 comprising a series of steps after maintaining the first roof section in the expanded position, the steps comprising:
   laterally raising a second room-enclosing roof section from a collapsed position to an expanded position;
   unfolding second wall and floor sections while raising the second room-enclosing roof section; and
   maintaining the second roof section in the expanded position.

28. The shelter-erecting method of claim 27 wherein the steps of maintaining the first and second roof sections in the expanded position fixes the longitudinal canopy axis.

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