

METHOD FOR EASY SAFE SETUP AND DISMANTLING OF A TENT STRUCTURE

TECHNICAL FIELD

[0001] The present disclosure relates generally to a tent. Embodiments of the disclosure are related to a tent structure and methods for easy safe setup and dismantling of a tent structure.

BACKGROUND

[0002] In recent years, government is more concerned with workplace safety. Tentage industries are classified as construction industries and are facing challenges, as the existing tent materials should meet the safety standards and requirements to avoid accidents. The existing process/method to set-up the tent is unsafe, as it requires man to climb up the tent and ladder to secure frames, roof canvas, lighting, fans, etc.

[0003] In available tent construction, as the installation of tent structure is performed only at elevated height, the installation of canvas, lighting, etc., over the constructed tent structure should also be performed at the elevated height. Thus, dismantling the tent structure is also performed at elevated height. Setup and dismantling of the tent structure performed at elevated height are not safe and are prone to accidents. The few preventive measures that are carried out to avoid accidents are safety harness, boom lifts or scissor lift and scaffolding. Still, as the works are performed at an elevated position, the chance of falling from height will be more, resulting in severe injuries. Also, the existing tent structures need more time and manpower to setup and dismantle.

[0004] A need, therefore, exists for an improved tent structure and method for easy safe setup and dismantling of a tent structure that overcomes the above drawbacks.

SUMMARY

[0005] The following summary is provided to facilitate an understanding of some of the innovative features unique to the disclosed embodiment and is not intended to be a full description. A full appreciation of the various aspects of the embodiments disclosed herein can be gained by taking into consideration the entire specification, claims, drawings, and abstract as a whole.

[0006] It is, therefore, one aim of the disclosed embodiments to provide for a tent comprising a tent structure. The tent structure has two or more arched frames, each supported at an elevated position above the ground by at least one upright truss, a plurality of straight frames mounted between two adjacent arched lattice frames and at least one tracker system mounted onto the top of the arched frame. The tracker system has a tracker slot throughout the length of the arched frame. The setup and dismantling of the tent structure is always performed at lower level at which the arched frames are upright on the ground. At least one roof canvas is installed over the tent structure such that the sides of the roof canvas along the length is inserted from one side of the tracker system into the tracker slots of adjacent arched frames and then reeled in from the other side of the tent structure to cover the tent top.

[0007] It is, therefore, one aim of the disclosed embodiments to provide for a tent having a plurality of rods (purlins) connecting a center top straight frame and its adjacent straight frame to support the center of the roof canvas laid over the tent structure.

[0008] It is, therefore, one another aim of the disclosed embodiments to provide for a tent which is configured during setup to initially position two or more arched lattice frames upright on the ground, mount straight frames between the adjacent arched frames to form the tent structure, lay canvas over the tent structure, lift the tent structure with canvas above the ground at an elevated position and support each arched frame in the tent structure using the upright truss.

[0009] It is, therefore, one another aim of the disclosed embodiments to provide for a tent that is configured during setup to connect each arched frame to at least one

chain block or automated pulley system or hydraulic system, to lift the tent structure.

[0010] It is, therefore, one another aim of the disclosed embodiments to provide for a tent in which the upright truss supports the tent structure at elevated position by connecting one end of the upright truss with the arched frame and other end resting on the ground.

[0011] It is, therefore, another aim of the disclosed embodiments to provide for a tent in which the tent structure with canvas is lifted up by at least lifting all the arched frames at both the sides in synchronization or first lifting one side of all the arched frame in the tent structure and then lifting all the arched frame at other side of the tent structure.

[0012] It is, therefore, one another aim of the disclosed embodiments to provide for a tent that is configured during dismantling to remove the roof canvas over the tent structure, then remove the upright truss at each end of the arched frame, lower the tent structure from the elevated position to the ground, dismantle straight frames between the two arched frames and then finally dismantle two or more arched lattice frames.

[0013] It is, therefore, one another aim of the disclosed embodiments to provide for a tent in which each arched frame is connected to a chain block or automated pulley or hydraulic system to lower the tent structure.

[0014] It is, therefore, yet another aim of the disclosed embodiments to provide for a tent in which the roof canvas is removed after lowering the tent structure.

[0015] It is, therefore, one another aim of the disclosed embodiments to provide for a tent that is lowered by at least lowering all the arched frames at both the sides in synchronization or first lowering one side of all the arched frames in the tent structure and then lowering all the arched frames at other side of the tent structure.

[0016] It is, therefore, one another aim of the disclosed embodiments to provide for

a method for setting up a tent structure comprising placing two or more arched lattice frames upright on the ground and mounting a plurality of straight frames between two adjacent arched frames to form a tent structure. Each arched frame has at least one tracker system with a tracker slot mounted on top of it. At least one roof canvas is laid over the tent structure between two adjacent frames of the tent structure. Then, the tent structure is lifted at an elevated position by connecting tracker system of each arched frame to a chain block or automated pulley system or hydraulic system and supporting the elevated tent structure using an upright truss.

[0017] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the sides of the roof canvas along the length from one side of the tracker system is inserted into tracker slots of adjacent arched frames and then reeled in from the other side of the tent structure to cover the tent top.

[0018] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the center top straight frame and its adjacent straight frames are connected before laying the canvas, using a plurality of rods (purlins) to support the canvas laid over the tent structure at the center.

[0019] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the upright truss and the straight frames at the ends of the arched frame are assembled at a safer reachable height in the elevated tent structure using a climbing device of a safer height.

[0020] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the arched frame is temporary supported using at least one support rod to facilitate installation of tent structure at ground level. The arched frames and straight frames are tightened together with at least one fastener and temporary support rod is removed before lifting the tent structure.

[0021] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the tent structure with canvas is lifted up by at least lifting one side

of all the arched frame in the tent structure and then lifting all the arched frame at other side of the tent structure or lifting all the arched frames at both the sides in synchronization.

[0022] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the canvas is laid over the straight frame by at least laying on each space between the adjacent arched frames one by one or laying on all the spaces between the adjacent arched frames together.

[0023] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the entire tent structure is assembled at the ground level and then elevated above the ground using the chain block or automated pulley system or hydraulic system to avoid accidents.

[0024] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which dismantling a tent structure is performed by removing one or more canvas over a tent structure. The tent structure comprises one or more arched frames, a plurality of straight frames between the arched frames and at least one tracker system with tracker slot mounted on top of the arched frame. The upright truss at the ends of the arched frames is removed from the elevated tent structure and is lowered from an elevated position by connecting each arched frame to a chain block or automated pulley system or hydraulic system. A plurality of straight frames between two adjacent arched frames is dismantled from the tent structure and then the arched frames are dismantled.

[0025] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the tent structure being at ground level, a plurality of rods (purlins) between the center top straight frame and at least one adjacent straight frame at a safer reachable height are removed using a climbing device of a safer height, for example a ladder.

[0026] It is, therefore, one another aim of the disclosed embodiments to provide for

a method in which the upright truss and the straight frames at the ends of the arched frame at a safer reachable height in the lowered tent structure are dismantled using a climbing device of a safer height, for example a ladder.

[0027] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the roof canvas along the length from the tracker slots of adjacent arched frames is removed by reeling out from the other side of the tent structure to uncover the top of the tent structure.

[0028] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the tent structure is first lowered by at least lowering one side of all the arched frames in the tent structure and then lowering all the arched frames at other side of the tent structure or lowering all the arched frames at both the sides in synchronization.

[0029] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the canvas is removed by at least removing from each space between the adjacent arched frames one by one or removing from all the spaces between the adjacent arched frames in synchronization.

[0030] It is, therefore, one another aim of the disclosed embodiments to provide for a method in which the entire tent structure is lowered from the elevated level to the ground using chain block or automated pulley system or hydraulic system and then dismantled at the ground level.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] The summary above, as well as the following detailed description of illustrative embodiments, is better understood when read in conjunction with the appended drawings. For the purpose of illustrating the present disclosure, exemplary constructions of the disclosure are shown in the drawings. However, the disclosure is not limited to specific methods and instrumentalities disclosed herein. Moreover, those

in the art will understand that the drawings are not to scale. Wherever possible, like elements have been indicated by identical numbers.

[0032] FIG. 1 is an illustration of a side view of a metal arched frame utilized in a tent structure, in accordance with the disclosed embodiments;

[0033] FIG. 2 is an illustration of a side view of a metal straight frame utilized in a tent structure, in accordance with the disclosed embodiments;

[0034] FIG. 3A is an illustration of an enlarge view of a portion of the metal arched frame depicted in **FIG. 1**, in accordance with the disclosed embodiments;

[0035] FIG. 3B is an illustration of a perspective view a tracker system installed on the top of the metal arched frame depicted in **FIG. 1**, in accordance with the disclosed embodiments;

[0036] FIG. 4 is an illustration of a perspective view showing the setting up of the arched and straight frames to form a tent structure, in accordance with the disclosed embodiments;

[0037] FIG. 5 is an illustration of a perspective view showing installation of a canvas over a portion of the tent structure depicted in **FIG. 4**, in accordance with the disclosed embodiments;

[0038] FIG. 6 is an illustration of a perspective view of the tent structure of **FIG. 5** completely installed with the canvas and one side elevated above the ground and supported with the upright trusses, in accordance with the disclosed embodiments;

[0039] FIG. 7 is an illustration of a perspective view of the tent structure of **FIG. 6** elevated above the ground and supported with the upright trusses at both the sides, in accordance with the disclosed embodiments;

[0040] FIG. 8 is an illustration of a perspective view of the tent structure, showing a

portion of the canvas removed during the process of dismantling the tent structure depicted in **FIG. 7**, in accordance with the disclosed embodiments;

[0041] **FIG. 9** is an illustration of a perspective view of the tent structure of **FIG. 8**, showing the canvas completely removed and the tent structure lowered to the ground at one side, in accordance with the disclosed embodiments; and

[0042] **FIG. 10** is an illustration of a perspective view of the tent structure of **FIG. 9**, showing the canvas completely removed and the tent structure lowered to the ground at both the sides, in accordance with the disclosed embodiments.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

[0043] The particular configurations discussed in the following description are non-limiting examples that can be varied and are cited merely to illustrate at least one embodiment and are not intended to limit the scope thereof.

[0044] A system and method for easy safe setup and dismantling of a tent structure is disclosed. The tent structure has arched frames each supported at an elevated position above the ground by an upright truss, straight frames mounted between two adjacent arched frames and a tracker system with a tracker slots mounted onto the top of the arched frame. A roof canvas is installed over the tent structure such that the sides of the roof canvas along the length is inserted from one side of the tracker system into the tracker slots of adjacent arched frames and then reeled in from the other side of the tent structure. The tent structure is lifted up from the ground after setup. At the time of dismantling, the tent structure is first lowered and then dismantled. Thus, setup and dismantling of the tent structure is always performed at lower level to avoid accidents.

[0045] Referring to **FIG. 1** a metal arched frame **102** used to form a tent structure (not shown) is disclosed. The arched frame **102** is of a lattice type and is supported at its ends in an elevated position using upright trusses **110** and **111**. One end of the upright trusses **110** and **111** is erected in the ground **101** and other end is connected

to the arched frame **102**. One end of the ropes **230** and **231** is tied to the ends of the arched frame **102**, while the other end is tied to a stable structure, for example concretes **210** and **211** respectively, which is fixed to the ground **101**. The ropes **230** and **231** with the concretes **210** and **211** provide stability to the tent structure. **FIG. 2** shows the straight frame **104** used in the tent structure. It should be noted that the arched frame and the straight frame can take different lattice pattern and is not limited to the one shown and described in the figures and embodiments. To form the tent structure, two or more arched frames **102** depicted in **FIG. 1** and a number of straight frames **104** depicted in **FIG. 2** are used. Many straight frames **104** are connected between the arched frames **102** to form the tent structure. The connector can be for example, bolts and nuts, hooks, etc., without limitation. For example, the arched frames **102** and the straight frames **104** may have one or more slots for connection, using the bolts and nuts. A bolt can be inserted into the slots of the straight and arched frames, for example, from the straight frame through the arched frame and tightened at the arched frame using a nut. The arched frames **102** and the straight frames **104** can also be connected using the hooks. For example, the straight frame **102** can have one or more hooks and the arched frame can have one or more hook receiving portions. At the time of connecting the straight frame and arched frame, the hooks are inserted into the hook receiving portions.

[0046] **FIG. 3A** is the enlarged view of a portion **103** of the arched frame **102** depicted in **FIG. 1**. The top **240** of the arched frame **102** is mounted with the tracker system **145** to facilitate easy installation of the roof canvas (not shown) over the tent structure. **FIG. 3B** shows the tracker system **145** depicted in **FIG. 3A**. The sides of the roof canvas along the length is inserted from one side of the tracker system **145** into the tracker slots **207** of the adjacent arched frames **102** and then reeled in from the other side of the tent structure to cover the top of the tent structure. The arched frame **102** and the upright truss **111** are connected using one or more fasteners **251** and **252** as shown in **FIG. 3A**. The fasteners **251** and **252** can be for example, two or more bolts and nuts without limitation.

[0047] **FIG. 4** shows the tent structure **100** assembled on the ground **101**. The tent

structure **100** has three arched frames **102**, **202** and **302**, straight frames **104** and **105** and upper rods **106** and **107**. The upper rods **106** and **107** also known as purlins, are used to support the roof canvas after installation. The arched frames **102**, **202** and **302** are erected upright on the ground **101**, as shown in the **FIG. 3** and are temporally supported upright during the setup using one or more support rods (not shown). The straight frame **104** is mounted between the adjacent arched frames **102** and **202**. A number of such straight frames are independently mounted throughout between the arched frames **102** and **202**. Similarly the straight frame **105** is mounted between the adjacent arched frames **202** and **302**. A number of such straight frames are independently mounted throughout between the arched frames **202** and **302** as shown. The number of the arched and straight frames for a tent structure may vary depending on the size and tent requirement of a user. The upper rods **106** (purlins) are mounted between a center top straight frame **133** and its adjacent straight frame **131** and the upper rods (purlins) **107** are mounted between a center top straight frame **133** and its adjacent straight frame **132**. The upper rods (purlins) **106** and **107** support the roof canvas when laid over the tent structure **100**. It should be noted that the straight frames **131**, **132** and **133** with the upper rods (purlins) **106** and **107** are mounted between the arched frames **102** and **202** and the similar structure can also be mounted between the arched frames **202** and **302**.

[0048] Referring to **FIG. 5**, the roof canvas **108** is laid over a portion of the tent structure **100** between the arched frames **202** and **302**. The sides **168** and **169** of the roof canvas **108** along the length are inserted from one side of the tracker system **145** into the tracker slots **207** as depicted in **FIG. 3B** of the adjacent arched frames **302** and **202** respectively. The roof canvas **108** can be reeled in from the other side of the tent structure **100** to completely cover the top of the tent structure **100**. It should be noted that similar to **FIG. 5**, the tent structure **100** between the arched frames **102** and **202** is also covered with a roof canvas **109**, as shown in **FIG. 6**. The sides **170** and **171** of the roof canvas **109** along the length are inserted from one side of the tracker system **145** into the tracker slots **207** depicted in **FIG. 3B** of adjacent arched frames **202** and **102** respectively.

[0049] It should be noted that the setup of the tent structure and the roof canvas are carried out on the ground level and needs only minimum operations to be performed at a safer height level. Operations at the safer heights are performed using a climbing device, for example, a ladder with a chain block pulley. The ladder with chain block pulley is positioned at all the footings of the tent structure for lifting and descending of the tent structure. The ladder with chain block pulley can also be used to assemble the upright truss. The ladder with the chain block pulley can also be used to assemble the straight frames at the ends of the arched frame (in elevated position) that are not mountable on the ground level. The tracker system allows the installation of the roof canvas on the ground level and thus eliminates the traditional method of installing the roof canvas working on the roof of the tent. Further the tracker system hastens the installation of the roof canvas.

[0050] After installation of the roof canvases **108** and **109** at the ground level **101**, the tent structure **100** can be lifted up to form a tent. The tent structure **100** is lifted up using the ladder with the chain block pulley. In one embodiment, one end of the tent structure is lifted up to an elevated position using ladder with chain block pulley and ends of the arched frames **102**, **202** and **302** are supported with the upright truss. Then the other end of the tent structure **100** is lifted up using ladder with chain block pulley at ends of the arched frames **102**, **202** and **302**. In another embodiment, both the ends of the arched frames **102**, **202** and **302** are lifted up by together n synchronization using one ladder with chain block pulley at each end of the arched frames **102**, **202** and **302**.

[0051] **FIG. 6** shows one end of the tent structure **100** lifted up using the ladder with the chain block pulley system and supported with the upright trusses. For example, each end of the arched frames **102**, **202** and **302** is connected to a ladder with a chain block pulley system (not shown). The ladder with the chain block pulley system has a ladder, a chain block, a pulley connected to the chain block. Workers at each end of the arched frame can pull the chain block connected to a pulley to lift each arched frame up. After lifting, the arched frames **102**, **202** and **302** are temporary supported using the ladder with the chain block pulley system for mounting the upright truss. As shown in **FIG. 6**, one side of the arched frames **102**, **202** and **302** at the elevated

position after lifting are firmly supported using the upright trusses **110**, **112** and **114** respectively. Each arched frame is tied at its ends with a rope and the other end of the rope is tied to a rigid structure, for example a concrete. For example, the end of the arched frame **102** is tied to one end of the rope **230** and the other end of the rope **230** is tied to the concrete block **210** to provide stability to a tent structure **100** at the time of use. Similarly, one end of the ropes **232** and **234** is tied to the arched frames **202** and **302** and other end of the rope **232** and **234** is tied to the concrete structure **212** and **214** respectively.

[0052] Referring to **FIG. 7**, the other end of the tent structure **100** is lifted up using the ladder with the chain block pulley system (not shown) and supported with the upright trusses. For example, the other ends of the arched frames **102**, **202** and **302** are each connected to the ladder with the chain block pulley system. Workers at each end of the arched frame can pull the chain block connected to a pulley to lift each arched frame up. After lifting, the arched frames **102**, **202** and **302** are temporary supported using the ladder with the chain block pulley system for mounting the upright truss. As shown in **FIG. 7**, other side of the arched frames **102**, **202** and **302** at elevated position are firmly supported using the upright trusses **111**, **113** and **115** respectively. Each arched frame is tied at its ends with a rope and the other end of the rope is tied to a rigid structure, for example a concrete. For example, , the other end of the arched frame **102** is tied to one end of the rope **231** and the other end of the rope **231** is tied to the concrete block **211** to provide stability to the tent structure **100** at the time of use. Similarly, one end of the ropes **233** and **235** is tied to the arched frames **202** and **302** and other end of the rope **233** and **235** is tied to the concrete structure **213** and **215** respectively. At least two bolts and nuts are used to connect the upright truss to the arched frames.

[0053] It should be noted that as in **FIG. 6** one end of the tent structure is at elevated position and other end is resting on the ground. **FIG. 7** shows both the ends are at elevated position. Both the ends of the tent structure **100** can be lifted together instead of lifting one by one. **FIG. 7** is the fully installed tent **200**. It should also be noted that the setup of tent structure is performed at the ground level and needs only operations to be performed at safer heights to avoid accidents at higher heights. From the **FIGS. 4-5** it is clear that the setup of tent structure and installation of canvas are performed

at the ground level and then the tent structure with canvas is lifted up. This satisfies the safety requirements and avoids accidents while installing the tent structure and the canvas at elevated unsafe heights.

[0054] From the **FIGS. 4-7** it is clear that installation of the tent **200** is easy and safe. Similarly, the tent **200** can be dismantled easily as shown in **FIGS. 8-9**. Referring to **FIG. 8**, the canvas **108** installed over the tent **200** depicted in **FIG. 7** can be removed by reeling the canvas **108** from one end of the tent **200**. It should be noted that the canvas **108** is removed or dismantled by pulling the canvas **108** from one end such that the canvas **108** passes through the tracker slots **207** depicted in **FIG. 3B** along the arched frames **202** and **302**. The canvas **108** is first removed and then the canvas **109** can be removed.

[0055] It should be noted that the tent structure is still at the elevated position at the time of removing the canvas, but the canvas can also be removed after lower the tent structure, in ground level without limitation. The removal of canvas before lowering the tent structure facilitates easy dismantling of the tent structure. Also the tracker system mounted on the arched frame facilitates easy removal of canvas with less labor. The roof canvas can be removed along its length from the tracker slots of adjacent arched frames by reeling out from the other side of the tent structure to uncover top of the tent structure.

[0056] After removing the canvases **108** and **109**, the tent structure **100** is lowered to the ground level. As shown in **FIG. 9**, the tent structure **100** at one end is lowered first, while the other end is still being supported by the upright trusses **110**, **112** and **114**. Then, as shown in **FIG. 10**, the tent structure is lowered at other end also. After lowering the tent structure **100**, the arched frames **102**, **202** and **302**, all the straight frames and the upper rods are dismantled at the ground level one by one. The dismantling of the straight frames and other installations in the tent structure that are at safer heights can be performed using a climbing device, for example a ladder of safer height. As all the operations are performed at safer heights, accidents due to higher heights can be avoided.

[0057] It should be noted that the set-up/installation includes installation of canvas, lighting, fans, etc., without limitation. The set-up/installation can be done on the ground or using two meter to three meter ladder. This definitely reduces the risk of workers falling from the height. "A" shaped ladder with the chain block pulley system can be used to lift and lower the tent structure, however electrical chain hoists or automated pulley system or hydraulic systems can be used without limitation.

[0058] It will be appreciated that variations of the above disclosed and other features and functions, or alternatives thereof, may be desirably combined into many other different systems or applications. Also, various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art which are also intended to be encompassed by the following claims.

[0059] Although embodiments of the current disclosure have been described comprehensively in considerable detail to cover the possible aspects, those skilled in the art would recognize that other versions of the disclosure are also possible.

What is claimed is:

1. A tent structure comprising:
 - a. two or more arched lattice frames each supported at an elevated position by at least one upright truss;
 - b. a plurality of straight frames mounted between two adjacent arched lattice frames;
 - c. at least one tracker system mounted onto a top of said arched lattice frames, wherein the tracker system has a tracker slot throughout a length of the arched frame;
 - d. at least one roof canvas installed over the tent structure, wherein an edge of the roof canvas is inserted into a tracker slot and then reeled in from the opposite side of the tent structure; and
 - e. a plurality of rods connecting a center top straight frame and at least one straight frame adjacent to the center top straight frame, wherein no upper rod connects the straight frame adjacent to the center top straight frame and the straight frames that are not adjacent to the center top straight frame, and
wherein each arched lattice frame is connected to a lifting and lowering system that includes a chain block or automated pulley system to lift the tent structure upright after installing the roof canvas.
2. The tent structure of claim 1 wherein setup is comprised of the steps of:
 - a. initially positioning the two or more arched lattice frames upright on the ground;
 - b. mounting the straight frames between the adjacent arched frames to form the tent structure;
 - c. laying the roof canvas over the tent structure;
 - d. lifting the tent structure with the roof canvas above the ground to an elevated position; and
 - e. supporting each arched frame in the tent structure using the upright truss.

3. The tent structure of claims 1 to 2 wherein takedown and dismantling is comprised of the steps of:

- a. removing the roof canvas from over the tent structure;
- b. connecting each arched frame to the lifting and lowering system to lower the tent structure;
- c. removing the upright truss at each end of the arched frame;
- d. lowering the tent structure from the elevated position to the ground;
- e. dismantling the straight frames between the two arched frames; and
- f. dismantling two or more arched frames.

4. The tent structure of claims 2 or 3, wherein the lifting and lowering system is a hydraulic system.

5. A method for setting up the tent structure of claim 1 comprising the steps of:

- a. placing two or more arched lattice frames upright, wherein each arched lattice frame has at least one tracker system with a tracker slot mounted on a top of the arched lattice frame;
- b. mounting a plurality of straight frames between two adjacent arched frames to form a tent structure;
- c. using a plurality of rods to connect the center top straight frame and at least one straight frame adjacent to the center top straight frame;
- d. laying the roof canvas over the tent structure between two adjacent frames of the tent structure;
- e. lifting the tent structure to an elevated position by connecting each arched frame to a lifting and lowering system; and
- f. supporting the tent structure using an upright truss, wherein the tent structure is assembled at ground level and then raised

up using the lifting and lowering system.

6. The method of claim 5 further comprising the step of inserting the sides of the roof canvas into the tracker slots and then reeling in from the opposite side to cover the tent structure.

7. The method of claim 5 further comprising the step of assembling the upright truss and the straight frames at the ends of the arched frame at or near ground level
8. The method of claim 5 further comprising the steps of:
 - temporarily supporting the arched frames using at least one support rod to facilitate installation of the tent structure at ground level;
 - tightening the arched frames and the straight frames together with at least one fastener; and
 - removing the support rod before lifting.
9. The method of claim 5, wherein the tent structure with the roof canvas is lifted up by:
 - lifting one side of the arched frame in the tent structure followed by lifting the arched frames at the opposite side of the tent structure; or
 - lifting the arched frames at both the sides in synchronization.
10. The method of claims 5 to 9, wherein the lifting and lowering system is a chain block or automated pulley system.
11. The method of claims 5 to 9, wherein the lifting and lowering system is a hydraulic system.
12. A method for take-down and dismantling the tent structure of claim 1 comprising the steps of :
 - a. removing one or more roof canvas from over a tent structure,
 - b. removing one or more upright truss mounted at ends of the arched frames in the tent structure at an elevated position;
 - c. lowering the tent structure from an elevated position by connecting each arched frame to a lifting and lowering system;
 - d. dismantling a plurality of rods between a center top straight frame and at least one adjacent straight frame of the lowered tent structure;

e. dismantling the straight frames between two adjacent arched frames from the tent structure; and

f. dismantling the arched frames,

wherein the tent structure is lowered from the elevated level to the ground using the lifting and lowering system that includes a chain block or automated pulley system and then dismantled at the ground level.

13. The method of claim 12 further comprising the step of dismantling the upright truss and the straight frames at the ends of the arched frame at or near ground level.

14. The method of claim 12, wherein the tent structure is lowered by:
lowering one side of all the arched frames in the tent structure and then lowering the arched frames at the opposite side of the tent structure; or
lowering all the arched frames at both the sides in synchronization.

15. The tent of claims 12 to 14, wherein the lifting and lowering system is a hydraulic system.