ABSTRACT

A tent assembly includes a tent frame, a top support frame mounted on top of the tent frame, an umbrella frame connected to the top support frame, a control unit connected to the umbrella frame and the tent frame to control folding and unfolding of the umbrella frame, and a canopy mounted on the umbrella frame. The tent frame includes a plurality of spaced-apart upright posts, and a plurality of horizontal bars each bridging top portions of two adjacent ones of the upright posts. The canopy has a peripheral end extending to the horizontal bars. A curtain extends downwardly from the peripheral end of the canopy.
TENT ASSEMBLY HAVING A CURTAIN AND AN UMBRELLA FRAME

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The invention relates to a tent assembly, more particularly to a tent assembly having a curtain and an umbrella frame.

[0003] 2. Description of the Related Art

[0004] Conventionally, a tent assembly includes a tent frame, and a tent cover for covering a top portion of the tent frame. A top support frame may be further provided on the top portion of the tent frame, after which the tent cover is mounted on the top support frame so as to cover the same. Although the tent cover can be used to protect against sunlight and rain, it is not collapsible when not in use. To enhance the protection effect of the conventional tent assembly against sunlight and rain, a curtain is further added below the tent cover so as to surround an outer periphery of the tent frame.

SUMMARY OF THE INVENTION

[0005] The object of the present invention is to provide a new structure for a tent assembly which has a curtain and an umbrella frame.

[0006] According to this invention, a tent assembly comprises a tent frame, a top support frame mounted on top of the tent frame, an umbrella frame connected to the top support frame, a control unit connected to the umbrella frame and the tent frame to control folding and unfolding of the umbrella frame, a canopy mounted on the umbrella frame, and a curtain. The tent frame includes a plurality of spaced-apart upright posts, and a plurality of horizontal bars each bridging top portions of two adjacent ones of the upright posts. The canopy has a peripheral end extending to the horizontal bars. The curtain extends downwardly from the peripheral end of the canopy.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiment with reference to the accompanying drawings, of which:

[0008] FIG. 1 is a perspective view of the preferred embodiment of a tent assembly according to the present invention;

[0009] FIG. 2 is a fragmentary partly exploded perspective view of the preferred embodiment, illustrating how an umbrella frame may be connected to a top support frame;

[0010] FIG. 3 is a fragmentary partly sectional view of the preferred embodiment, illustrating the umbrella frame in an unfolded state;

[0011] FIG. 4 is a fragmentary enlarged perspective view of the preferred embodiment, illustrating how a curtain is connected to a canopy;

[0012] FIG. 5 is a fragmentary sectional view of the preferred embodiment, illustrating how the canopy is connected to a horizontal bar; and

[0013] FIG. 6 is a view similar to FIG. 3, but illustrating the umbrella frame in a folded state.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0014] Referring to FIGS. 1 to 6, the preferred embodiment of a tent assembly according to the present invention is shown to comprise a tent frame 1, an umbrella frame 2, a control unit 3, a canopy 4, and a curtain 6.

[0015] The tent frame 1 includes four spaced-apart upright posts 11, and four horizontal bars 12. Each of the horizontal bars 12 bridges top portions of two adjacent ones of the upright posts 11, and includes at least one attachment rod 122 (see FIG. 4) connected to an corresponding horizontal bar 12. A top support frame 13 is connected to the upright posts 11, and includes a central tubular connector 131, and a plurality of curved rods 132 extending outwardly from the central tubular connector 131 toward the corresponding upright posts 11. The tent frame 1 may only include at least three vertical and horizontal bars 11, 12, and its structure is not limited to the disclosed embodiment.

[0016] The umbrella frame 2 is hung on the top support frame 13, and is foldable from an unfolded state shown in FIGS. 2 and 3 to a folded state shown in FIG. 6. The umbrella frame 2 includes a telescopic tube, and a plurality of ribs 25 connected pivotally and foldably to the telescopic tube. The telescopic tube includes an outer tube 21 connected to and extending downwardly from the central tubular connector 131, an inner tube 22 (see FIG. 3) connected telescopically to the outer tube 21, an upper hub 23 sleeved on and fixed to the outer tube 21, and a lower hub 24 that is opposite to the upper hub 23 and that is fixed to a bottom end of the inner tube 22. The ribs 25 include a plurality of angularly spaced-apart upper ribs 251 connected pivotally to and extending outwardly from the upper hub 23, and a plurality of angularly spaced-apart lower ribs 252. Each of the lower ribs 252 has one end connected pivotally to the lower hub 24, and the other end connected pivotally to the corresponding upper rib 251. The control unit 3 includes a string guide, a hook member 32, and a string 33. The string guide includes two spaced-apart guide wheels 31 mounted on one of the rods 132 of the top support frame 13, and a guide ring 34 disposed between the guide wheels 31. The hook member 32 is fixed to one of the upright posts 11 which is proximate to the guide wheels 31. The string 33 is used for controlling folding and unfolding of the ribs 25 of the umbrella frame 2 manually, and has a connecting end 331 extending into the inner tube 22 and connected to the lower hub 24, and a pull end 332 opposite to the connecting end 331. The string 33 passes through the inner tube 22, over one of the guide wheels 31, through the guide ring 34, and over the other one of the guide wheels 31. The pull end 332 of the string 33 is secured to the hook member 32. The method of securing the string 33 to the tent frame 1 is not limited to that of the disclosed embodiment. For example, the pull end 332 of the string 33 may be tied to any location of the tent frame 1, thereby dispensing with the need for the hook member 32.

[0017] The canopy 4 is mounted on the upper ribs 251 of the umbrella frame 2, and may be folded and unfolded together with the ribs 25. The canopy 4 has a peripheral end provided with a plurality of spaced-apart apertures 41 (see FIG. 4) and connected removably to the inner sides of the horizontal bars 12.
[0018] A plurality of retaining units 5 are provided to attach removably the peripheral end of the canopy 4 to the inner sides of the horizontal bars 12. Each of the retaining units 5 includes an elastic rope 51 and a socket member 52. The elastic rope 51 is folded, and its two ends are knotted together so that the rope 51 has a knot portion 511 and a ring portion 512 opposite to the knot portion 511. The socket member 52 is sleeved between the knot and ring portions 511, 512. During assembly, the ring portion 512 of the rope 51 passes through a hole in the socket member 52, the corresponding through hole 41 in the canopy 4, around the attachment rod 122, and loops over the socket member 52, so that the ring portion 512 is clamped between the socket member 52 and the peripheral end of the canopy 4. Securing all the ropes 51 respectively to the socket members 52 and to the canopy 4 results in positioning of the peripheral end of the canopy 4 on the horizontal bars 12.

[0019] The curtain 6 extends downwardly from the peripheral end of the canopy 4, and includes two interconnectable curtain members 61 each having a top end connected detachably to the peripheral end of the canopy 4. Each curtain member 61 may be a screen or a canvas. The number of the curtain members 61 may be adjusted depending on the size of the canopy 4.

[0020] A fastening unit 7 (see FIGS. 4 and 5) is provided to connect detachably the top ends of the curtain members 61 to the peripheral end of the canopy 4, and includes two zippers 71. Each of the zippers 71 is sewn to the peripheral end of the canopy 4 and the top end of the corresponding curtain member 61, so that when the zippers 71 are closed, each curtain member 61 extends downwardly from the peripheral end of the canopy 4 and inwardly of the horizontal bars 12, and shields spaces between the upright posts 11. The number of the zippers 71 may be adjusted depending on the length of the top end and quantity of the curtain members 61.

[0021] In an alternative embodiment, the fastening unit 7 may include a plurality of hook-and-loop fasteners (not shown) for connecting detachably the curtain members 61 to the peripheral end of the canopy 4. In another alternative embodiment, the fastening unit 7 may include an elongated hook fastener strap (not shown) that extends continuously along the outer surface of the top end of the corresponding curtain member 61, and an elongated loop fastener strap (not shown) that extends continuously along the inner surface of the peripheral end of the canopy 4. The number of the hook and loop fastener pieces is not limited in any manner, and may be varied as needed. In still another embodiment, the fastening unit 7 may include a combination of a zipper and hook-and-loop fasteners, or a plurality of hanging hooks (not shown) provided on the top ends of the curtain members 61 and hooked to the peripheral end of the canopy 4.

[0022] The tent assembly of the present invention further comprises a plurality of fixing units 8 provided to fix bottom peripheries of the curtain members 61 on the corresponding upright posts 11. In this embodiment, the fixing units 8 are configured as cords connected to outer surfaces of the bottom peripheries of the curtain members 61, and are tied to the corresponding upright posts 11. In other embodiments, the fixing units 8 may be hooks, hook-and-loop fasteners, etc., and are not limited to the disclosed embodiment.

[0023] When the umbrella frame 2 is in the unfolded state, as shown in FIGS. 2 and 3, the pull end 332 of the string 33 is hooked on the hook member 32, and the lower hub 24 together with the inner tube 22 are guided by the connecting end 331 of the string 33 to move upwardly until the lower hub 24 abuts against a bottom periphery of the outer tube 21. At this time, the ribs 25 together with the canopy 4 are unfolded. Afterwards, the retaining units 5 are operated so as to retain the peripheral end of the canopy 4 to the inner sides of the horizontal bars 12. Finally, the top ends of the curtain members 61 are connected to the peripheral end of the canopy 4 by closing the zippers 71, and the fixing units 8 are tied to the corresponding upright posts 11, thereby completing assembly of the tent assembly of the present invention.

[0024] When the tent assembly of the present invention is not to be used, the curtain members 61 are first separated from the peripheral end of the canopy 4 by opening the zippers 71, after which the peripheral end of the canopy 4 is removed from the horizontal bars 12 by operating the retaining units 5. The pull end 332 of the string 33 is then unhooked from the hook member 32, and is released gradually so that the lower hub 24 and the inner tube 22 can move simultaneously and gradually away from the outer tube 21, thereby bringing the ribs 25 and the canopy 4 to a folded position. At this time, the position of the umbrella frame 2 is changed from the unfolded state shown in FIGS. 2 and 3 to the folded state shown in FIG. 6. In this state, the canopy 4 and the curtain 6 are prevented from accumulating dirt and dust and from being damaged by heavy winds.

[0025] From the aforementioned description, it is apparent that the tent assembly of the present invention uses the control unit 3 to operate folding and unfolding of the umbrella frame 2. As a result, operation of the tent assembly is quick and easy. Furthermore, because the peripheral end of the canopy 4 is connected detachably to the inner sides of the horizontal bars 12, and the curtain members 61 are connected to the peripheral end of the canopy 4 and are located inwardly of the horizontal bars 12, the tent assembly of the present invention not only can provide protection against sunlight and rain, but also from mosquitoes, flies, and dirt.

[0026] While the present invention has been described in connection with what is considered the most practical and preferred embodiment, it is understood that this invention is not limited to the disclosed embodiment but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

I claim:
1. A tent assembly comprising:
   a tent frame including a plurality of spaced-apart upright posts, and a plurality of horizontal bars each bridging top portions of two adjacent ones of said upright posts;
   a top support frame mounted on top of said tent frame;
   an umbrella frame connected to said top support frame;
   a control unit connected to said umbrella frame and said tent frame to control folding and unfolding of said umbrella frame;
   a canopy mounted on said umbrella frame and having a peripheral end extending to said horizontal bars; and
a curtain extending downwardly from said peripheral end of said canopy.

2. The tent assembly of claim 1, wherein said control unit includes a string to control folding and unfolding of said umbrella frame.

3. The tent assembly of claim 2, wherein said umbrella frame includes a telescopic tube, and a plurality of ribs connected pivotally and foldably to said telescopic tube, said top support frame having a central tubular connector connected to said telescopic tube.

4. The tent assembly of claim 3, wherein said telescopic tube includes an outer tube connected to and extending downwardly from said top support frame, an inner tube connected telescopically to said outer tube, an upper hub sleeved on and fixed to said outer tube, and a lower hub that is opposed to said upper hub and that is fixed to a bottom end of said inner tube, said string having a connecting end extending into said inner tube and connected to said lower hub, and a pull end that is opposed to said connecting end, that extends outwardly from said inner tube, and that is connected to said tent frame.

5. The tent assembly of claim 4, wherein said ribs further include a plurality of angularly spaced-apart upper ribs connected pivotally to said upper hub, and a plurality of angularly spaced-apart lower ribs connected pivotally to said lower hub and respective ones of said upper ribs, said canopy being mounted on said upper ribs.

6. The tent assembly of claim 3, wherein said control unit further includes a string guide installed on said top support frame to guide said string.

7. The tent assembly of claim 6, wherein said string guide includes a plurality of spaced-apart guide wheels mounted on said top support frame.

8. The tent assembly of claim 7, wherein said top support frame includes a plurality of rods extending outwardly from said central tubular connector toward respective ones of said upright posts, said guide wheels being mounted on one of said rods.

9. The tent assembly of claim 4, wherein said control unit further includes a hook member fixed to one of said upright posts and retaining said pull end of said string.

10. The tent assembly of claim 1, wherein said curtain has a top end, said tent assembly further comprising a fastening unit for connecting detachably said top end of said curtain to said peripheral end of said canopy.

11. The tent assembly of claim 10, wherein said fastening unit includes a zipper sewn to said top end of said curtain and said peripheral end of said canopy.

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