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Kirkham

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[54] **TENTAGE STRUCTURE**

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[52] **U.S. Cl.** ..... **135/1 R**

[51] **Int. Cl.** **A45f 1/00,** E04b 1/347

[58] **Field of Search** ..... 135/1 R, 3 R, 3 E, 4 R; 52/71, 79, 81

[56] **References Cited**

UNITED STATES PATENTS

2,969,074	1/1961	Willis	135/4 R X
3,513,861	5/1970	Johnson	135/1 R
3,699,986	10/1972	Kirkham	135/1 R

Primary Examiner—J. Karl Bell

Attorney, Agent, or Firm—Criddle & Thorpe

[57] **ABSTRACT**

A tentage structure wherein an open tent pavilion is convertible by the addition of a base unit to form a fully enclosed tent. The tent pavilion has spaced, opposed end walls interconnecting spaced, central and side ridges of a top and each extending downwardly therefrom to an anchor point; and spaced, opposed side walls of generally triangular configuration having their bases connected to the top side ridges and respectively extending downwardly to an anchor point. The base unit has a floor and triangular walls with doors and windows formed therethrough. Fanned upright poles and ridge poles provide framing for the pavilion, and means are provided to secure each of the walls of the base unit between an end wall and a side wall of the pavilion.

5 Claims, 6 Drawing Figures

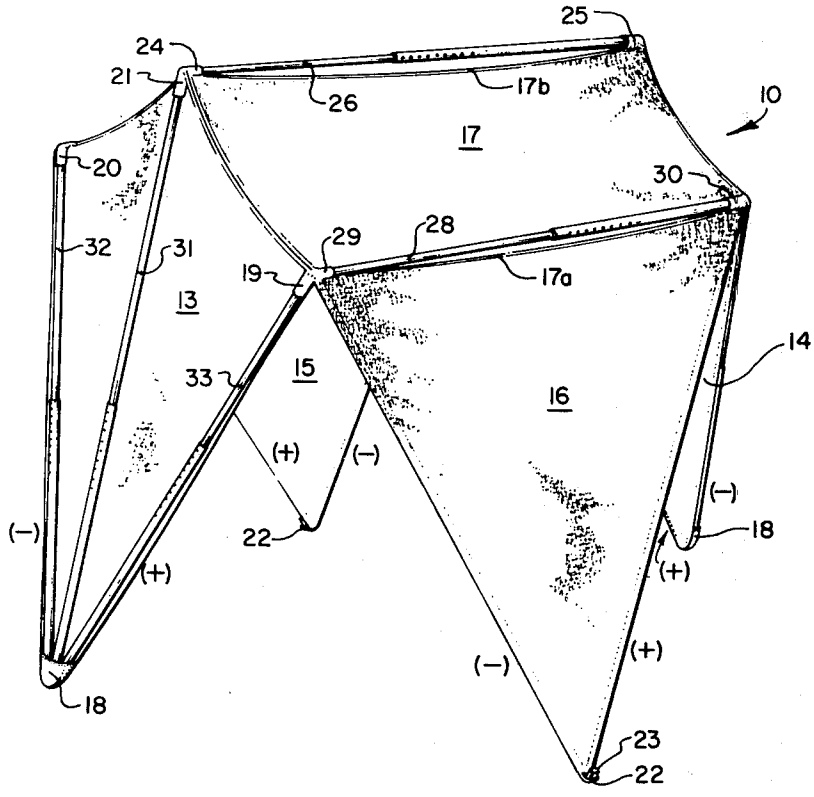


FIG 1

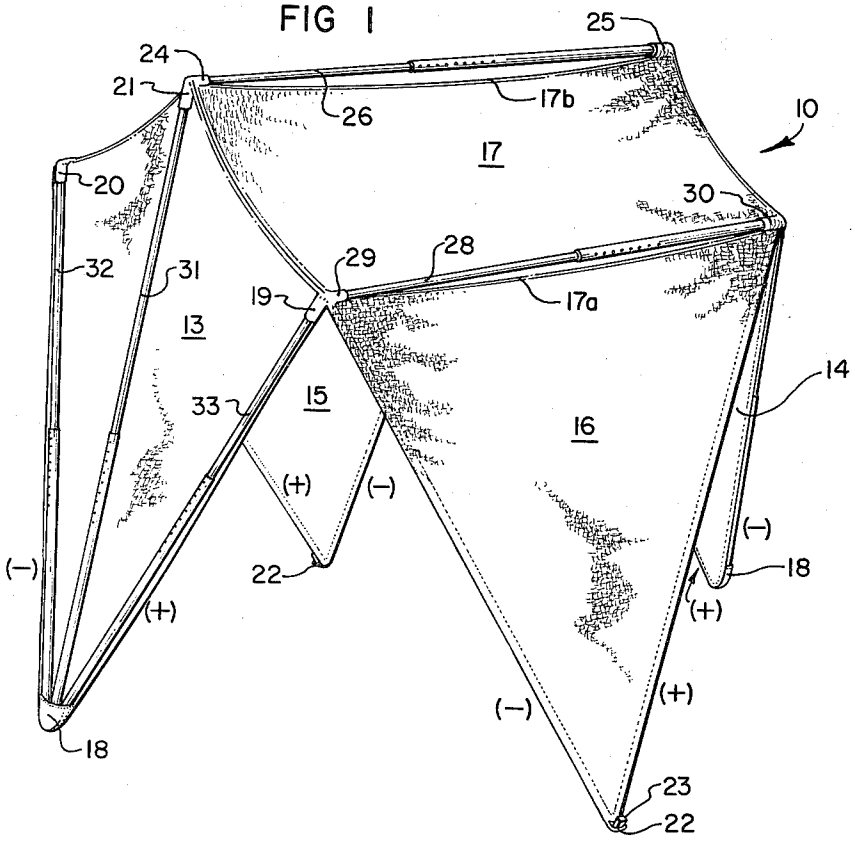


FIG 2

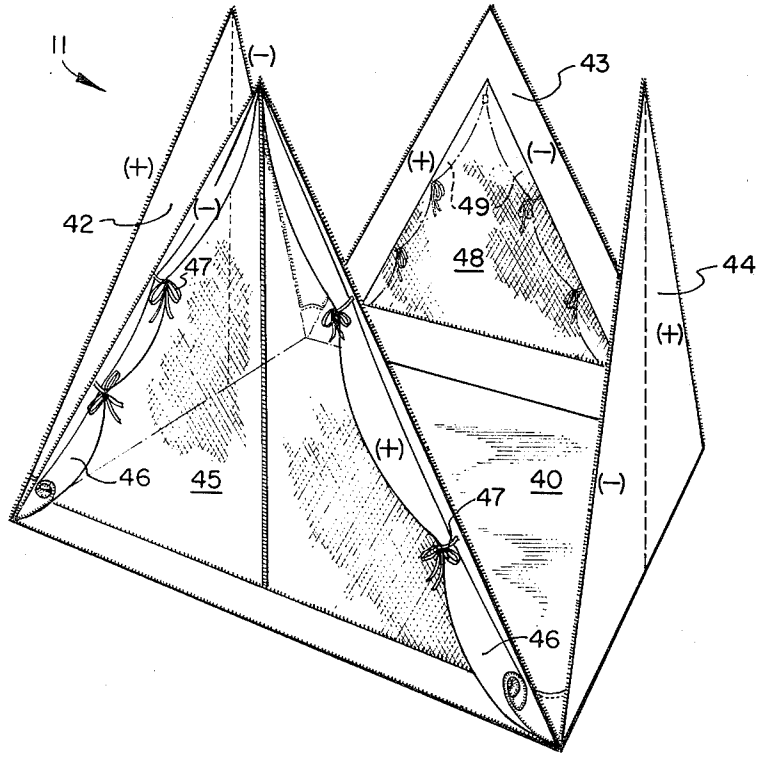


FIG 3

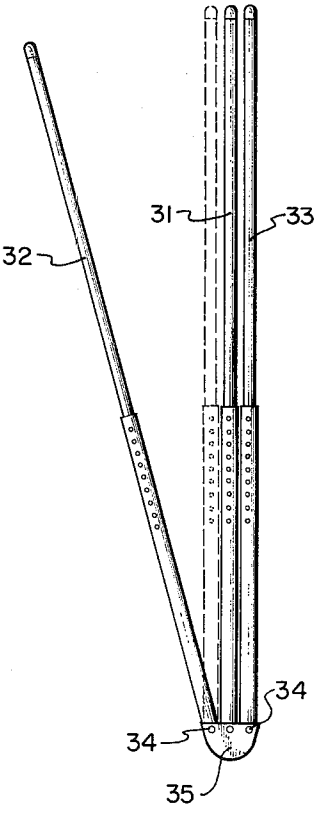


FIG 4

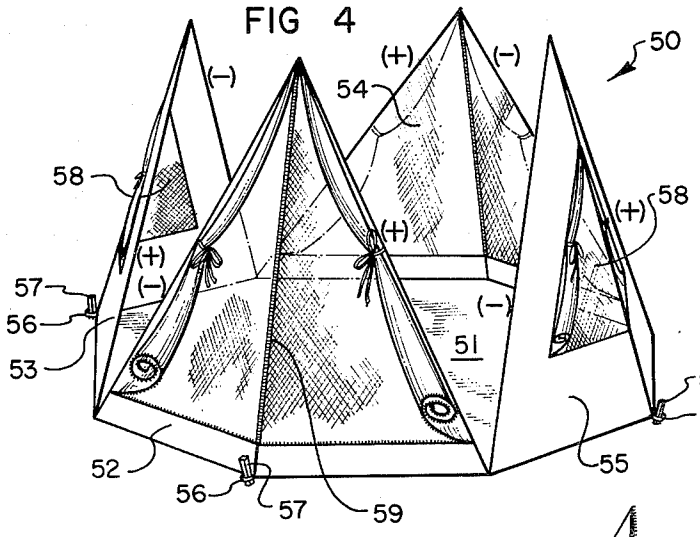


FIG 5

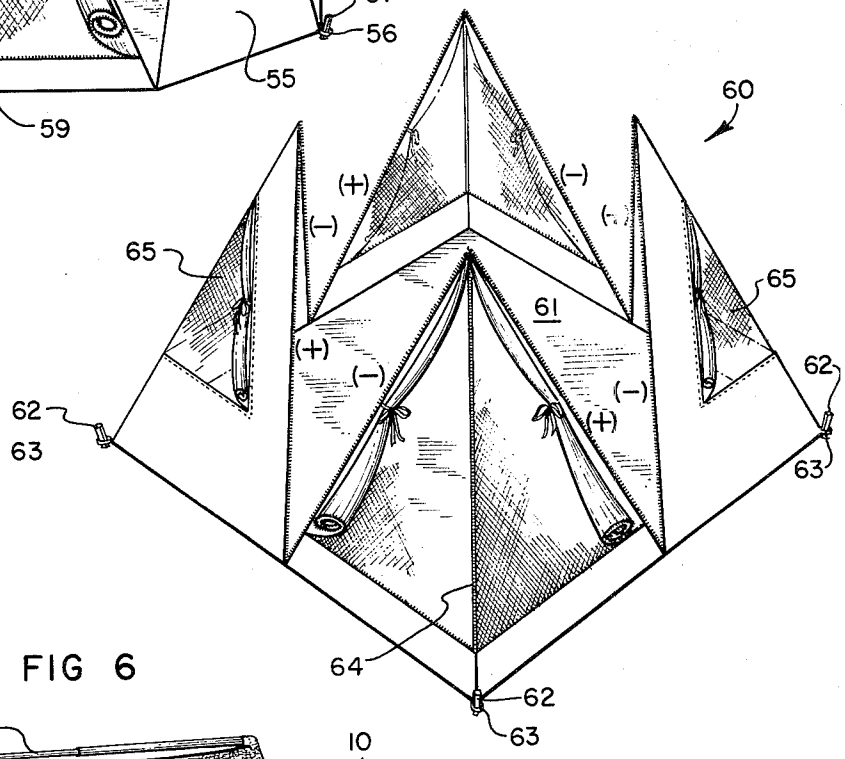
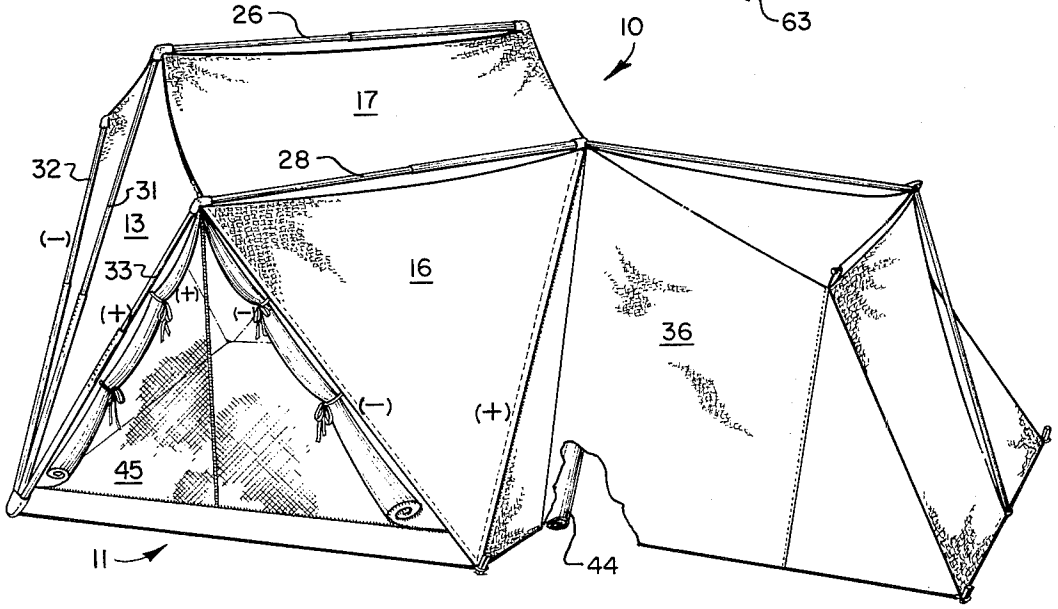


FIG 6



TENTAGE STRUCTURE

BRIEF DESCRIPTION OF THE INVENTION

1. Field of the Invention

This invention relates to tentage and particularly to open-type tent pavilions and accessories thereto.

2. Background of the Invention

In my U.S. Pat. No. 3,699,986, there is disclosed an open-type tent pavilion and a number of module-type units that can be attached to the pavilion to form composite tents of various sizes and configurations. The pavilion disclosed therein utilizes resilient members to maintain a canopy and attached panels or walls of flexible sheet material taut, and the module-type units are adapted to be added onto the pavilion as extensions thereof or as separate closures for the pavilion openings.

The pavilion disclosed in my aforementioned patent has proven very satisfactory. However, in some instances, it is desirable that additional central head room be provided and particularly where the tentage is subjected to possibly heavy snow accumulations it is frequently desirable that a pitched roof that will allow the snow to more easily slide off, be used.

SUMMARY OF THE INVENTION

The present invention is also in an open-type tent pavilion, but has a somewhat different configuration with a pitched roof affording additional central head room. A base unit is provided as an accessory to be used to convert the pavilion into a closed tent.

Principal objects of the present invention are to provide a tent pavilion using conventional tent framing structures in a unique manner such that the resulting structure, in its erected condition, has a plurality of identically arranged openings to which a base unit or other modular units can be attached in converting the open-type pavilion to an enclosed tent.

Another object is to provide an open-type pavilion, constructed such that different base units can be easily attached thereto to change the over-all interior floor dimensions of the resulting tent, whereby a single pavilion can be converted into tents of varying sizes.

Still another object is to provide a tent pavilion with a pitched roof.

Principal features of the invention include a pavilion having a pair of spaced end walls, supported by central and outer upright supports fanned out from anchor points for the end walls, a pitched roof extending between the end walls and side walls extending downwardly from the pitched roof to anchor points.

Additional objects and features of the invention will become apparent from the following detailed description and drawings disclosing what are presently contemplated as being the best modes of the invention.

THE DRAWINGS

In the drawings:

FIG. **1** is a perspective view, taken from slightly above and between side and end walls of a tent pavilion of the invention;

FIG. **2**, a similar view of a base unit of the invention;

FIG. **3**, a plan view of typical upright supports for the pavilion;

FIG. **4**, a view like that of FIG. **2**, but showing another embodiment of the base unit;

FIG. **5**, a similar view showing still another embodiment of the base unit; and

FIG. **6**, a view of the pavilion of FIG. **1**, with the base unit of FIG. **2**, installed therein, and a modular tent unit attached thereof.

DETAILED DESCRIPTION

Referring now to the drawings:

In the illustrated preferred embodiment, the structure of the invention includes a tent pavilion, shown generally at **10** and a base unit, shown generally at **11.**

The tent pavilion **10** includes a pair of end walls **13** and **14,** a pair of side walls **15** and **16,** and a roof **17** interconnecting the respective walls.

Each of the end walls has a pocket **18** formed at a lower end thereof, pockets **19** and **20** formed at the junctions of each end wall with the lower edges **17***a* of the roof, and a pocket **21** formed at the junction of the wall with the central ridge **17***b* of the roof. The edges of the end walls extend from the pockets **19** and **20** to the pocket **18** such that the portions of the end walls between the pockets **18, 19** and **20** are generally triangular in configuration.

The side walls **15** and **16** are also of generally triangular configuration, with their bases being connected to the lower edges **17***a* of the roof, and with the end walls extending downwardly and outwardly with respect to the roof of the erected pavilion, to apexes that serve as anchoring points for the the side walls. The usual tent peg loops **22** are provided at the apexes of the side walls so that stakes **23** can be driven therethrough to anchor the side walls to the ground.

As has been previously noted, the roof **17** has a central ridge **17***b*. Pockets **24** and **25** are formed at opposite ends of the ridge to receive the ends of a telescoping, locking, central ridge pole **26.** During assembly of the pavilion, the opposite ends of pole **26** are respectively inserted into the pockets **24** and **25.** The telescoping portions of pole **26** are extended to the maximum extent possible, thereby stretching the ridge **17***b* taut and the pole sections are locked together. Similarly, side roof poles **28** have their opposite ends inserted into pockets **29** and **30** provided therefore at opposite ends of the lower edges of the roof, adjacent to pockets **19** and **20.** The side roof poles **28** are also made to telescope, with the telescoping sections arranged to be locked together at desired extension positions. During assembly of the pavilion, the side roof poles, like the center ridge pole, are inserted into the pockets provided therefore; are extended to stretch the roof fabric taut; and are then locked to hold them in the set extended positions. The central ridge pole and the side roof poles thus hold the roof taut between the end walls **13** and **14.**

When the pavilion is assembled, the end walls are stretched into a taut, upright condition by an extended central, telescoping and locking upright pole **31** that has its opposite ends inserted into the pockets **18** and **21,** and by extended outer telescoping and locking upright poles **32** and **33** that have their opposite ends inserted respectively into pockets **18** and **19,** and **18** and **20.**

For convenience of handling and to reduce the wear in pocket **18,** the poles **31, 32** and **33** are all preferably pivotally connected by pins **34,** as shown in FIG. **3,** to a smoothly curved pivot plate **35** that is adapted to fit within the pocket **18.** While they are not shown and, in

many instances they are not needed, it will be apparent that peg loops can be provided at pockets **18** to allow the pavilion to be further anchored in place. However, the downward pressure exerted through the poles **31**, 32, and **33** will normally be sufficient to prevent movement of the pockets **18** and the end walls.

The poles **31, 32** and **33** stretch the end walls in away from pockets **18,** and the anchored side walls stretch the roof taut between them and hold the poles **31, 32,** and **33** taut in a fanned position, radiating like spokes from the pocket **18.** So assembled, the pavilion is of pitched roof, open-type, with about one-half of the area beneath and around the roof enclosed by the side and end walls and with the spaces between wall edges being of generally triangular configuration.

The edges of the walls of the pavilion each have a zipper track, with the tracks of alternate edges having a zipper runner thereon. For purposes of clarity, those wall edges having a zipper track without a runner thereon will be identified with a (−) while those having tracks with a runner are identified with a (+). The zipper tracks serve as part of a connection means for connecting the base unit **11** to the pavilion and additionally provide means for connecting units such as the modular tent unit **36,** FIG. **6,** having matching zipper portions surrounding the entrance way thereof, or such other modular units as are disclosed in my aforementioned U.S. Pat. No. 3,699,986, or of the type disclosed in my co-pending application for U.S. Pat. Ser. No. 295,516, filed Oct. 6, 1972.

Because unit **11** comprises a floor **40,** of generally rectangular configuration, and generally triangular walls **41, 42, 43,** and **44,** each having its base connected to one side of the floor. Floor **40** is dimensioned such that the spread corners thereof and the base edges of the walls will fit within the ground engaging apexes of the pavilion walls, with the zipper tracks on the edges of the base unit walls matching up with the zipper tracks on the edges of the pavilion walls. Alternate ones of the zipper tracks of the base unit do not have a zipper runner thereon and these are identified, as before, with a (−). The other zipper tracks of the base unit do have a zipper runner thereon and these are identified with a (+). When the floor **40** is properly positioned within the base and the zipper tracks on the walls of the pavilion and base are matched up, the matched (+) (−) set of tracks include a runner to interlock the tracks or to release the tracks in customary zipper fashion.

A doorway having the usual bi-parting, zipper closed, tent screening **45** and cover flaps **46,** both adapted to be tied back out of the doorway by ties **47,** is provided through at least one wall of the base unit and a window opening, having a permanent screen covering **48** and back cover flaps **49,** is preferably provided in at least one of the other base unit walls.

In FIG. **4,** there is shown another embodiment of base unit suitable for attachment to the pavilion unit of FIG. **1.** In this embodiment, the base unit, shown generally at **50,** includes a floor **51** of generally octagonal configuration. Four base unit walls **52, 53, 54** and **55** are fixed to the floor and each base unit wall is fixed to and projects from two adjacent edges of the floor to an apex. Zipper tracks and runners are provided on the edges of the base unit walls, and if necessary, are continued along the base unit walls adjacent to the connection of the base unit walls with the floor, in the same manner as has been previously disclosed.

Peg loops **56** are provided at the central intersections of each base unit wall and the adjacent edges of the floor. Thus, with the walls zipped into place in the pavilion openings the addition of four tent pegs **57** inserted through the stretched loops **56** will hold the base taut and provide an enlarged covered base area. Screened windows **58,** with overlying fabric flaps can be provided in each of the walls, in which case access to the interior of the tent will be by opening one of the zippers interconnecting the pavilion and base unit. Alternatively, a conventional bifold tent door **59,** can be provided in one or more of the base unit walls.

Still another embodiment of base unit suitable for attachment to the pavilion unit of FIG. **1,** is shown in FIG. **5.** In this embodiment, the base unit, shown generally at **60,** includes a generally rectangular floor **61** and base unit walls that each extend from a corner of the floor to a location generally between the mid-points of sides of the base, upwardly to a common apex.

Four tent peg loops **63** are provided, with one tent loop being connected to each corner of the floor, so that pegs **62** inserted therethrough will hold the floor and the floor unit walls attached thereto and connected to the pavilion walls in a tautly stretched condition.

As with the previously described embodiments, zipper tracks and runners are provided on the edges of the base unit walls and, if necessary, are continued along the base unit walls adjacent to the connection of the base unit walls with the floor so that the base unit walls can be connected to the pavilion walls. Screened windows **65** can be provided in the base unit walls and a conventional bi-parting tent door **64** can be provided in one or more of the base unit walls, should this be desired.

With the construction described, it is possible to greatly reduce the costs of producing and inventorying tents of various sizes. The pavilion portion of the tent can be of a standard size and bases of varying floor sizes can be adapted to be attached thereto. For example, with a standard pavilion having extended ridge poles 9½ feet long, extended side roof pole lengths and a distance between side roof poles of 6½ feet and a length of seven feet along each upright edge of the pavilion wall, a base unit of the type shown in FIG. **2** will provide a covered floor area of about eighty square feet. Using the same pavilion and a base unit of FIG. **4,** a covered floor area of about 110 square feet can be obtained, while if a base unit of the type shown in FIG. **5** is used, the covered floor area is about 144 square feet. It will be apparent that completely enclosed tents of varying sizes and shapes can thus be constructed, merely by providing base units of different floor areas and compatable base walls. This, of course, means that a manufacturer can build a single pavilion and a variety of base units, but that he does not need to build complete tents of varying sizes in anticipation of sales that may or may not be realized. Similarly, dealers can maintain an inventory of tents of varying sizes, but in reality, need only an assortment of base units and some pavilion units since such base units can all adapt to use with the standard pavilion unit. The dealer can, therefore, maintain a variety of sizes of tents for sale, with a minimum of expenditure and storage space. The customer buying a tent of the present invention, can enlarge the tent size as his tentage requirements change, merely by acquiring a pavilion unit and then, as needed, base units of selected floor area size or one or

more modular tent units that can be connected to the pavilion walls to extend from the pavilion. If an even larger structure is desired, two or more pavilions can be interconnected at common openings.

If desired, the pavilion, as herein disclosed, can be used with any of the base units disclosed, while at the same time one or more modular tent units can be attached to the pavilion. As shown in FIG. **6**, for example, one base unit wall **44** is released from the adjacent pavilion walls, is rolled down to and under the base unit floor and the modular tent unit **36** is zippered into place.

Although preferred forms of my invention has been herein disclosed, it is to be understood that the present disclosure is by way of example, and that variations are possible without departing from the subject matter coming within the scope of the following claims, which subject matter I regard as my invention.

I claim:

1. A tent pavilion comprising

a flexible top;

flexible pavilion walls extending from the top, said walls

comprising interconnected oppositely spaced side walls and oppositely spaced end walls, each with a pair of edges extending from the top to a remote apex;

means for anchoring the apexes of the side walls to the ground;

means for releasably stretching the roof taut, comprising

a central telescoping ridge pole extending from the center of the connection of one end wall with the top, above the top, and to the center of the connection of the other end wall with the top,

means for releasably securing only the ends of the central ridge pole to the top and end walls,

a pair of telescoping side roof poles, respectively spaced on opposite sides of the central ridge pole, and each extending above and along the connection of the top and a side wall and between the end walls, and

means for releasably securing only the ends of the roof poles to the top and end walls; and

support means for holding the end walls in a generally upright condition.

2. A tent pavilion as in claim **1**, wherein the support means for holding the end walls in a generally upright condition comprise

a telescoping support pole extending exteriorly of and from the apex of each end wall to the adjacent end of each of the central ridge and roof poles; and

means for anchoring only the ends of the support poles at the apexes of the end walls and to the end walls adjacent to the ends of the central ridge and roof poles.

3. A tent pavilion as in claim **2**, wherein

the central ridge pole is elevated above the roof poles when the roof is stretched taut and the support poles are fully extended between the apex of each end wall and the roof.

4. A tent pavilion as in claim **3**, wherein

a pocket is provided at the apex of each end wall;

the telescoping support poles at each end wall are pivotally connected to a common plate; and

the common plates are inserted into the pockets.

5. A tent pavilion as in claim **1**, further including

a base unit, comprising a floor of flexible sheet material,

base unit walls formed as one piece with and extending from said floor, each of said base unit walls having pairs of edges respectively conforming to the pairs of edges of the pavilion and terminating in an apex; and

means releasably coupling the pair of edges of each base unit wall to the edges of adjacent ones of the pavilion walls with the floor stretched taut beneath the top.

* * * * *