Jan. 10, 1961 K. H. BURGIN 2,967,532

ROLLAWAY TENT STRUCTURE

Filed Feb. 10, 1958 4 Sheets-Sheet 1

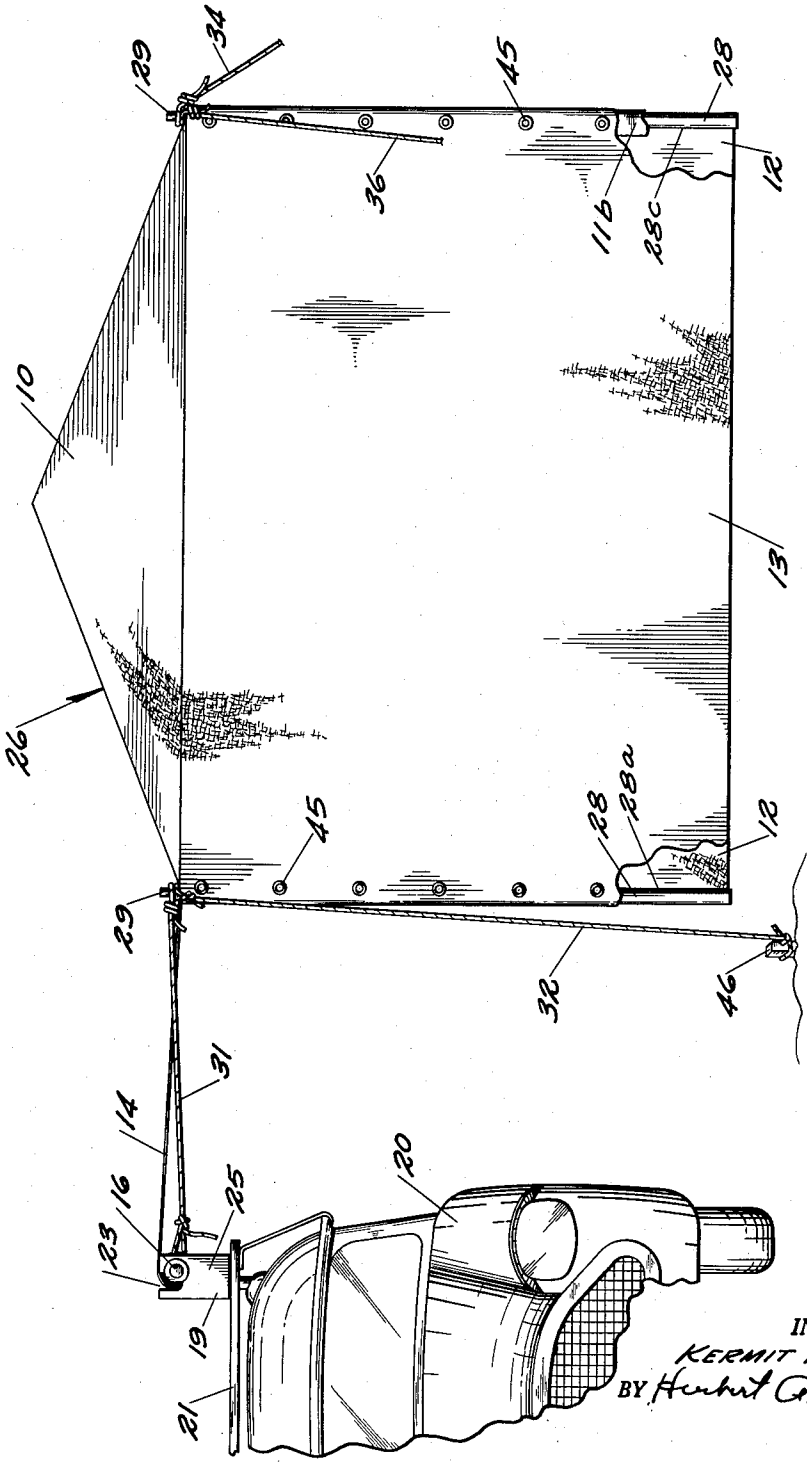


FIG. 1

INVENTOR.
KERMIT H. BURGIN
BY Herbert A. Mantzey
ATTORNEY

Jan. 10, 1961 K. H. BURGIN 2,967,532

ROLLAWAY TENT STRUCTURE

Filed Feb. 10, 1958 4 Sheets-Sheet 2

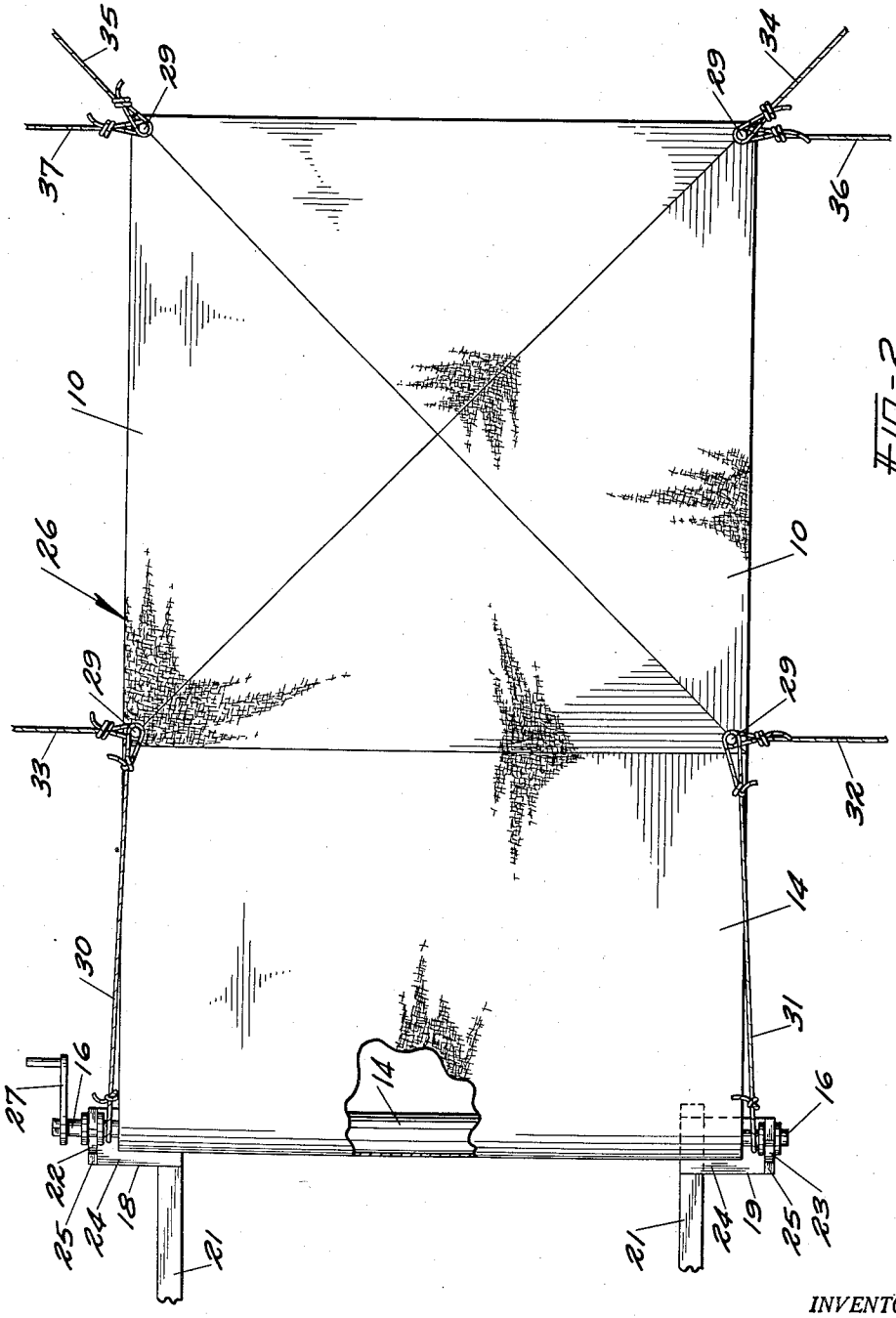


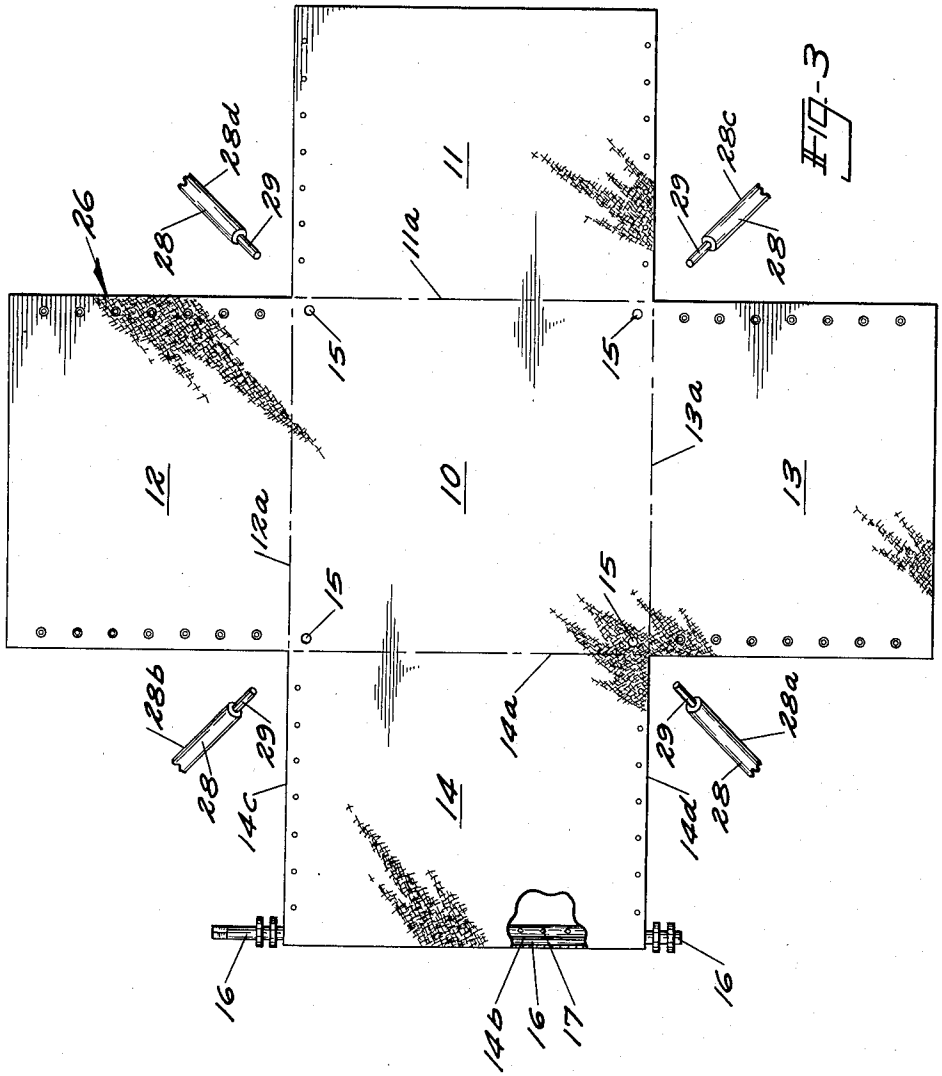
FIG-2

INVENTOR.
KERMIT H. BURGIN
BY Herbert A. Minturn
ATTORNEY

Jan. 10, 1961 K. H. BURGIN 2,967,532

ROLLAWAY TENT STRUCTURE

Filed Feb. 10, 1958 4 Sheets-Sheet 3



INVENTOR.
KERMIT H. BURGIN
BY Herbert A. Wintercorn
ATTORNEY

Jan. 10, 1961 K. H. BURGIN 2,967,532

ROLLAWAY TENT STRUCTURE

Filed Feb. 10, 1958 4 Sheets-Sheet 4

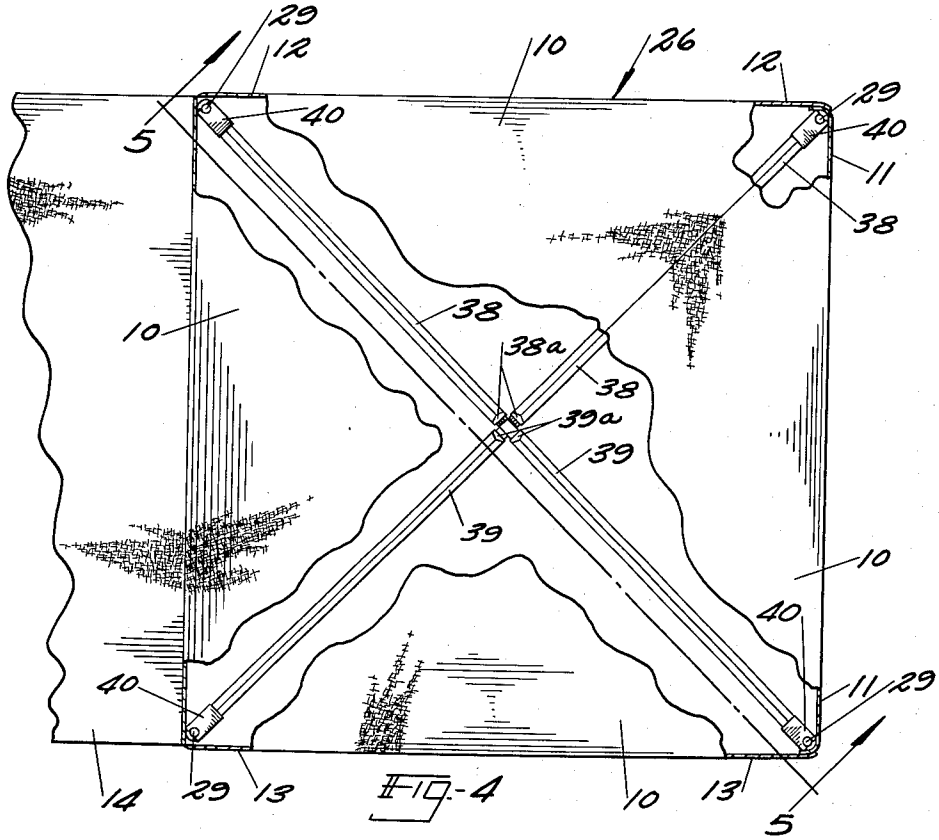


FIG.-4

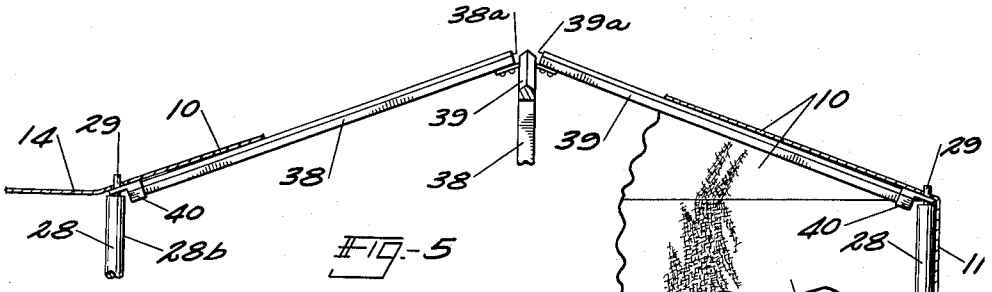


FIG.-5

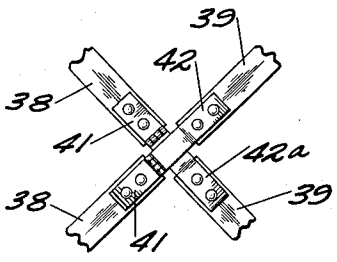


FIG.-6

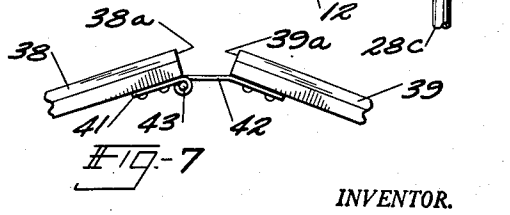


FIG.-7

INVENTOR.
KERMIT H. BURGIN
BY Herbert A. Meinhart
ATTORNEY

United States Patent Office 2,967,532 Patented Jan. 10, 1961

2,967,532

ROLLAWAY TENT STRUCTURE

Kermit H. Burgin, R.R. 1, Whitestown, Ind.

Filed Feb. 10, 1958, Ser. No. 714,319

1 Claim. (Cl. 135—1)

This invention relates to a tent structure such as would be employed in camping and which is carried in a collapsed state by a vehicle such as an automobile.

A primary object of the invention resides in a tent structure which may be carried in a rolled condition on the top of an automobile, such as by a luggage carrier, and which may be pulled therefrom and easily and readily set up by being supported in part by the vehicle and primarily by poles and a collapsible and removable roof support all in conjunction with guy ropes.

An important object of the invention is to provide a structure which may be handled readily by one person by pulling the tent from a roller on the vehicle, inserting corner poles and raising the tent and supporting it by bringing guy wires or ropes from the upper exposed poles or extensions therefrom, guy wires which are anchored to the ground or other convenient objects, following which the roof may be stretched upwardly for head room and for water drainage all without having to apply or employ a center pole.

Furthermore the tent structure provides side walls which may be lowered or raised at will without interfering with the supporting mechanism.

Also there is another decided advantage in that particularly in rainy weather, the tent may be erected very quickly and be ready for shelter within a very few minutes after arrival at the camping site, the time being being greatly reduced from that required for setting up tents of other structures heretofore employed.

Further advantages of the invention will become apparent to those versed in the art in the following description of one particular form which is made in conjunction with the accompanying drawings, in which

Fig. 1 is a view in side elevation of a tent embodying the invention in a set up condition;

Fig. 2 is a view in top plan and partial section;

Fig. 3 is a view in top plan of the tent covering material in a spread out condition;

Fig. 4 is a view in top plan and partial section of the tent roof structure;

Fig. 5 is a vertical section on the line 5—5 in Fig. 4;

Fig. 6 is a detail in bottom plan of the central crossover of roof supports; and

Fig. 7 is a view in detail of a pair of roof supports and their hinged interconnections.

A tent fabric is formed in the manner illustrated in Fig. 3, wherein there is a central rectangular panel **10**; an end wall **11**; side walls **12** and **13**; and a wall section **14** which may be employed as a front wall when lowered or as an extension from the roof **10** as a porch covering. These five sections **10**, **11**, **12**, **13**, and **14** are interconnected along the lines **11***a*, **12***a*, **13***a*, and **14***a*, respectively which define the boundaries of the roof section **10**. These members **11**, **12**, **13**, and **14** may be integral parts extending from the section **10**, or may be stitched thereto, in any event the attachments of those members to the section **10** being preferably a permanent construction. In each of the respective four corners of the section **10**, there is a hole **15** provided. These holes **15** may be defined in the usual and well known manner by a grommet either of metal or of a stitching construction. The outer edge **14***b* of the section **14** is preferably attached to a roller **16**, this attachment being had by any suitable means, either in a releasable manner, or in a permanent manner such as by tacks **17**. The roller **16** extends by each end beyond the side edges **14***c* and **14***d* of the section **14**.

A pair of roller supporting brackets **18** and **19** are secured to a vehicle or automobile **20**, such as to a luggage carrier **21** at fore and aft portions thereof. The roller **16** is removably, rotatably supported by these brackets **18** and **19**, the roller **16** being dropped down through slots **22** and **23** respectively, these slots entering from the upper ends of the brackets **18** and **19**. These brackets **18** and **19** in the form herein shown, are simply angular members carrying a foot **24** and an upturned end **25**, the foot **24** being secured to the luggage carrier **21** in each instance.

In a carrying condition, the tent generally designated by the numeral **26** has the roller **16** drop downwardly in the slots **22** and **23** with the forward section **14** secured to the roller **16** as above described. The back section **11** is folded on the line **11***a* completely over onto the roof section **10**; the side section **12** is folded on the line **12***a* completely over the section **10** with the wall section **11** intervening; and the other side wall section **13** is folded on the line **13***a* completely over the section **12**, so that these wall sections all then are superimposed over the central roof section **10**. Of course the order of folding these wall sections over on the roof section **10** may be varied as desired, bringing the two side wall sections **12** and **13** over the section **10** first and then bringing the rear wall **11** over last, this sequence being varied as indicated.

Preferably the material out of which the tent **26** is made in respect to the roof and side wall sections is as light as may be had without sacrificing water repelling qualities and strength as to resistance to tearing and as against bagging under wind pressure and the like. The tent fabric may be a light canvas or any of the synthetic fabrics now available, the material in any event preferably being treated so as to resist transfer of water from the outside to the inside such as might otherwise occur during rain. In any event, the essential characteristics of the fabric of the tent **26** are that there be water repelling quality; resistance to any appreciable stretching; and light weight.

With the tent fabric folded as above indicated, a crank member **27** may be applied to one end of the roller **16**, and the roller **16** turned so as to wind up the tent fabric around the roller **16**. Thus for transportation, the tent **26** is completely wound around the roller **16**.

Upon arriving at the camp site, the tent fabric would be gripped such as along the fold line **11***a* and pulled away from the automobile **20**, thus unwinding it from the roller **16**, whereupon the sections **11**, **12**, and **13** depending upon the relative overfolding initially, are laid to extend outwardly from the roof section **10**.

Four poles indicated each respectively by the numeral **28** are provided. Each of the upper ends of these poles **28** has an axially extending end **29**.

An easy way to erect the tent includes, preferably, the leaving of a portion of the fabric section **14** wound about the roller **16**, and then poles **28***a* and **28***b* are brought up to have their pins **29** inserted through the holes **15** of the roof section **10** which are adjacent the line **14***a*. The roller **16** is then held against turning by any suitable means, herein shown as by use of two lengths of rope **30** and **31** looped by respective ends over the pins **29** extending through and above the roof section **10**, and carried by their other ends to be tied around the roller **16** as best indicated in Fig. 2.

The poles 28*a* and 28*b* are then brought up one after the other to a substantially vertical position in each instance and guy ropes 32 and 33 with ends respectively looped around the pins 29 of those poles 28*a* and 28*b* are brought out laterally in each instance to be secured to any convenient article, such as to a stake 46 in each instance driven into the ground.

Then the poles 28*c* and 28*d* are brought up to have their pins 29 extending respectively through the holes 15 adjacent the line 11*a*, and these poles are raised, one after the other, to approach vertical positions, and diagonal guy ropes 34 and 35 having looped ends engaging about the pins 29 are carried diagonally outwardly and secured by stakes (not shown) driven into the ground.

Lateral guy ropes 36 and 37 with upper looped ends engaged around the pins 29 of these poles 28*c* and 28*d* are preferably employed to extend diagonally downwardly to stakes (not shown) driven into the ground. The tent wall sections 11, 12, and 13, then hang vertically downwardly. The roof section 10 is then stretched upwardly into the form of a pyramid, somewhat exaggerated as shown in Fig. 1.

In order to stretch the roof section 10 upwardly, two pairs of roof supporting members hereinafter termed ribs are provided. Each pair comprises a pair of rigid bars 38 and 39 having forked outer end brackets 40 in each instance. These two bars 38 and 39 have a hinge connection, wherein there is one leaf 41 secured to the underside of the end of the bar 38, that is the end opposite to the end carrying the fork member 40, and a long leaf 42 secured to the end of the bar 39, this long leaf 42 extending a distance beyond the end 39*a* of the bar 39 to the end 38*a* of the bar 38 so as to provide a gap between those two ends 38*a* and 39*a*. The actual hinge pintle 43 is positioned at the end 38*a*. As indicated in Fig. 4, these two pairs of bars 38 and 39 are positioned to have their forked brackets 40 slipped under the fabric of the roof section 10 to straddle and to come into abutment with the respective pins 29 of the four poles 28, one pair of bars 38 and 39 crossing over the other pair by the hinge leaf 42, Fig. 6, one leaf 42*a* overlying the other leaf 42, this one leaf 42*a* passing between the ends 38*a* and 39*a* so that the two sets of bars 38 and 39 will be maintained in that diagonally aligned arrangement. As the first pair of bars 38 and 39 is pushed upwardly under the roof section 10 to stretch the roof upwardly over these ribs as they are carried into a substantially vertical plane, the second pair of bars 38 and 39 is then likewise positioned by pushing them up under the first pair of bars 38 and 39 until the leaf 42 comes to the uppermost position whereupon the leaf 42*a* will drop between the ends 38*a* and 39*a* as has been described so that these two pair of bars will then be held against shifting from their positions raising the roof section 10 upwardly into the pyramidal form. In this manner, it is to be seen that there is no center pole required, and that additional head room is obtained by pushing the centermost part of the roof section 10 upwardly defining the pyramid shape.

With the tent thus erected, and, it being desirable that the automobile 20 be detached for use separate from the tent, the spacing ropes 30 and 31 may be, one at a time, released from the roller 16 and carried diagonally downwardly and outwardly from the respective pins 29 at the other ends of these ropes to have the lower ends of the ropes then secured in any suitable manner such as by stakes, whereupon the roller 16 may be lifted up out of the brackets 18 and 19 and dropped downwardly to form a closure across the relatively front side of the tent.

The various sections forming the walls of the tent, sections 11, 12, 13, and 14, may be detachably secured one to the other around the poles 28 in any suitable manner, such as by buttons or glove fasteners or even by tying, one particular form being herein shown as glove fasteners 45, Fig. 1, the side section 13 overlapping an end portion 11*b* carried around the pole 28 to have the vertical end portion of the section 13 lap thereover and secured one to another through the fasteners 45. The same construction is repeated at each of the poles 28.

Thus it is to be seen that I have presented by invention in the one particular form extremely simplified in nature not only in the construction itself but also in the manner of erection and returning to carrying condition. The demounting of the tent is readily apparent, the corner poles 28 being removed, the guy ropes released, assuming that the roller 16 has been returned to the supporting and carrying brackets 18 and 19. The side walls having been released one from the other at their normal corners, are folded over as above indicated whereupon the roller 16 is turned through the crank member 27 to bring the structure in a rolled condition up around the roller 16. The tent poles 28 may be each in a continuous length, or may be made in sections as is well known to those versed in the art, but in either event, the poles are carried either by putting them between turns of the fabric as it is wound about the roller 16, or they may be carried separately along with the guy ropes across the luggage carrier 21.

While I have herein shown and described my invention in this one particular form, it is obvious that structural variations may be employed without departing from the spirit of the invention, and I therefore do not desire to be limited to that precise form beyond the limitations which may be imposed by the following claim.

I claim:

In a tent roof structure, the combination with a flexible roof covering having corners; a pole for each of said corners interengaging therewith; one pair of ribs; a pintle hinge permanently interconnecting opposing end portions of said ribs; said end portions being spaced apart across the hinge to leave a gap therebetween, the combined lengths of said pair of ribs when in straight line opposite extension from said hinge exceeding the distance between a pair of poles, one diagonally located from the other across said roof covering; said one pair of ribs having free rib ends thereof engaging said pair of poles and said ribs extending diagonally upwardly from the poles under the roof covering in inverted V formation by hinging at said hinge as an apex; a second pair of ribs; a second pintle hinge permanently interconnecting opposing end portions of the ribs of the second pair, the rib end portions being spaced one from the other across the hinge to leave a gap therebetween; the combined lengths of said second pair of ribs in straight opposing end to end alignment including their interconnecting hinge exceeding the distance between a second pair of poles wherein the poles are diagonally disposed at the corner portions of the covering, the diagonal line therebetween crossing the diagonal line between the poles of said first pair; the ribs of said second pair having free ends engaging the poles of said second pair and said second pair of ribs extending diagonally upwardly under said covering from their engagements with the second pair of poles in inverted V formation to have the hinge of said second pair under the hinge of the first rib pair, and the opposing ends of the first pair of ribs adjacent the opposite sides of the second hinge; one of the ribs in each of said pairs terminating at the pintle of the hinge in each pair, and the other ribs terminating by ends spaced at a distance from said pintles.

References Cited in the file of this patent

UNITED STATES PATENTS

1,607,020	Stoll	Nov. 16, 1926
1,699,094	Chadirjian et al.	Jan. 15, 1929
1,719,055	Herzer	July 2, 1929
2,107,608	Hewlett	Feb. 8, 1938
2,159,273	Killinger	May 23, 1939