March 18, 1958 S. J. CHAPRON 2,827,065

TENT FRAME

Filed July 14, 1955

Fig. 1.

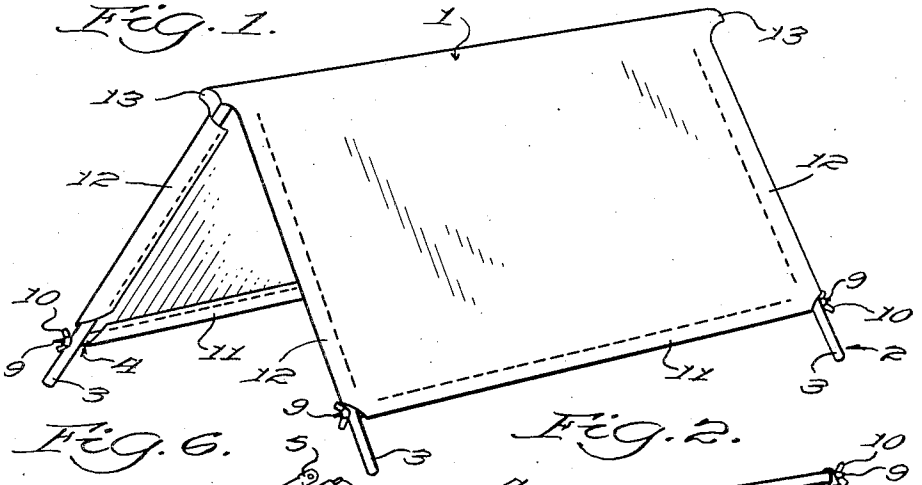


Fig. 2.

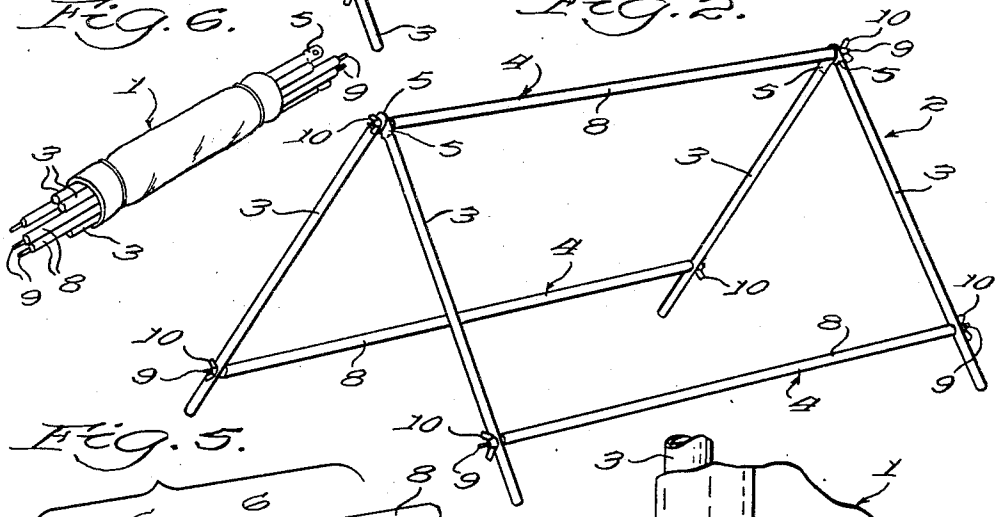


Fig. 6.

Fig. 5.

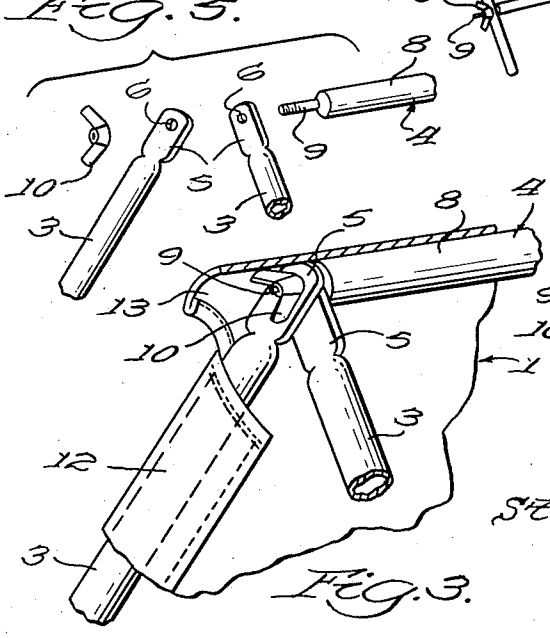


Fig. 3.

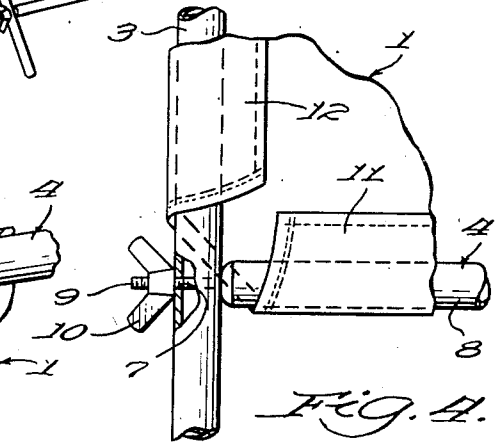


Fig. 4.

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TENT FRAME

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3 Claims. (Cl. 135—1)

This invention relates to tent frames and more particularly to an improvement therein characterized by simplicity of construction and ease of setting up and taking down and forming into a compact package for transportation and storage.

The principal object of the invention is to provide a tent frame primarily intended for such uses as a sunshade at beach or like locations which is composed of few different parts and which is quickly set up and knocked down and which when set up can be readily moved from place to place or arranged at various heights as desired.

Another object of the invention is to provide a tent frame composed of only two forms of principal parts both of which are of simple construction and light weight.

A further object of the invention is to provide a tent structure comprising a frame formed of straight tubular elements including four identical leg elements and three identical transverse elements.

With the foregoing objects in view, together with such additional objects and advantages as may subsequently appear, the invention resides in the parts and in the construction, combination and arrangement of parts described, by way of example, in the following specification of a presently preferred mode of execution; reference being had to the accompanying drawings which form a part of said specification and in which drawings:

Fig. 1 is a perspective view of a tent structure embodying the present invention,

Fig. 2 is a similar view of the tent frame,

Fig. 3 is an enlarged scale, fragmentary, perspective view of the connected parts of the frame at one end of the ridge pole; the cover being broken away for clearness of illustration,

Fig. 4 is an enlarged scale, side elevational fragmentary view showing the connection of one of the side transverse elements with a leg element,

Fig. 5 is an exploded view of the ends of the elements shown connected in Fig. 3, and

Fig. 6 is a perspective view of the tent frame as knocked down and rolled up in the tent fabric for transportation and/or storage.

In general, the illustrated embodiment of the invention comprises a fabric cover **1** of generally rectangular configuration in plan and to which detailed reference will later be made, and a frame structure **2** comprising four leg elements **3** which are identical in form and three transverse elements **4** which are also identical. Since the leg elements are identical they can be used at any position for the leg elements in the frame and since the transverse elements are likewise identical, they can be used interchangeably as the ridgepole component or at the sides of the tent frame. Thus, the frame is formed of only two types of different parts, viz., the leg element and the transverse element.

Each leg element **3** comprises a length of straight light weight metal tubing, aluminum tubing being especially well adapted for such use, and the tubing is flattened at

one end as at **5** and provided with a stud receiving hole **6** is in the said flattened end. The leg element is also provided with a second stud receiving hole **7** axially parallel to the hole **6** and spaced inwardly from the opposite end thereof a sufficient distance so that the portion of the leg element beyond said last named hole is available to be inserted in the sand or ground to anchor the tent thereon. Each transverse element **4** comprises a straight length of metal tubing **8** having axially disposed threaded studs **9, 9** projecting from each end thereof and adapted to be received in the holes **6** and **7** in the leg elements; each of said studs being provided with a wing nut **10**.

The illustrated cover **1** comprises a generally rectangular piece of fabric provided with hems **11, 11** along each end thereof in which the transverse elements **4** employed as side members are received. Additionally the sides of the cover **1** are provided with hems **12** each extending from the respective corners of the cover towards the mid length of the cover and terminating slightly short of the said mid length position; said hems **12** receiving the portions of the respective leg elements between their flattened ends and the juncture with the transverse elements. Preferably, the corners of the cover are cut off on a diagonal so that the adjacent end of the hems **11** and **12** each terminate slightly short of the corner to provide clearance for the joining of the leg and transverse side elements as shown in Fig. 3. Also the portions of the side edges of the cover between the adjacent ends of the hems **12** is hemmed and allowed to project as a flap **13** overlying the juncture of a pair of leg elements with the transverse element serving as the ridgepole as shown in Figs. 1 and 4. The illustrated cover is probably the most practical for the purpose, but any other means of attaching a cover to the frame may be used. Examples of such other means would be the use of loops or straps on the edges of the cover to encircle the leg elements and the lower transverse elements or the use of grommets in the edges of the cover by which the cover may be attached by lacings or by hooks carried by the grommets and engaging the tent frame members.

Assuming that all of the component parts are completely disassemled and it is desired to erect the illustrated tent, the cover **1** is first spread out flat with the hemmed edges turned up. The leg elements are inserted in the four hems **12** with their flattened ends extending to the center line of the cover and the two of the transverse elements that are to serve as the side members are inserted in the hems **11, 11**. Also the third transverse member is laid across the mid length of the cover. The wing nuts are removed from the studs and the studs on the transverse elements constituting the side members are inserted in the holes **6** in the leg elements and the nuts replaced to secure them together. The studs of the transverse element serving as the ridge pole of the tent at the center of the cover are then inserted through the adjacent flattened ends of the leg elements and the nuts replaced and tightened to complete the assembly. One side of the tent can then be folded on over on the other and the tent can then be picked up and set in the desired location with the sides thereof spread apart to any desired angle. If anchoring of the tent is desired, the ends of the leg elements can be pushed into the ground to the desired extent.

Thereafter, to knock the tent down for transportation and storage, it is necessary only to lay the tent on the ground with the sides laying on each other and remove either the transverse elements or the leg elements, then place the removed elements along one edge of the cover parallel to the elements not removed and roll up the cover about the contained frame elements as indicated in Fig. 6,

securing the rolled up cover and frame elements by straps or the like as indicated at S. To re-erect the tent it is then necessary only to unroll the cover, replace and reconnect the removed frame elements and set up the assembled tent structure.

Thus there has been provided an extremely simple and economical tent structure comprised of only three different component parts which is most economical to manufacture and which is readily set up and taken down. The various parts which are identical can be employed in any of the locations for which they are intended, i. e., any one of the leg elements can be used at any of the four leg element positions and any one of the transverse elements can be employed at either the ridgepole or side member position as may happen to be convenient.

The above described invention is not to be deemed to be limited to the specific mode of execution above disclosed, and it will be understood that it includes all such changes and modifications as shall come within the purview of the appended claims.

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1. In a tent structure, a frame comprising four identical leg elements and three identical transverse elements; each of said elements comprising a length of straight tubular metal; one end each of two of said leg elements being detachably connected to one end of one of said transverse elements and the other two of said leg elements having one end thereof detachably connected to the opposite end of said one transverse element, and the others of said transverse elements being disposed parallel to and spaced from said first transverse element a distance sufficient to permit the portions of the leg elements extending therebeyond to serve as ground penetrating and anchoring means and each having one end thereof similarly detachably connected to one each of the leg elements connected to said one end of said one transverse element and each having their opposite end detachably connected to one each of the leg elements which are connected to the opposite end of said one transverse element; said frame being adapted to support a fabric cover of rectangular form in plan having hems across each end thereof through which one each of said others of said transverse elements may extend, and having hems on each side through which the portions of said leg elements extending between the points of attachment of said one transverse element and the points of attachment with said other transverse elements are received incident to erection of the tent frame and cover and from which hems said leg elements and said other transverse elements are removed incident to striking the tent frame and cover.

2. A tent structure as claimed in claim 1 in which the means for detachably connecting said leg elements with said transverse elements comprises threaded studs extending axially outwardly from each end of said transverse elements and through holes in said leg elements, and nuts on said studs operable to clamp the engaged portion of the leg element against the end of the transverse element.

3. In a tent structure, a frame including four identical leg elements each formed of a length of straight tubular metal and having one end flattened and having a pair of parallel stud receiving holes disposed one through said flattened end and the other disposed inwardly of the opposite end of the leg element, and three identical transverse elements each formed of a length of straight tubular metal and having a pair of axially disposed threaded studs projecting one each from each end of the transverse member; the studs on one of said transverse members each, respectively, extending through the holes in the flattened ends of two of said leg elements, nuts on each of said studs on said one transverse element operable to clamp the engaged ends of the leg portions against the ends of said one transverse element while allowing said leg portions to be moved relatively to each other about the axis of said studs to different angular positions with resultant support of said one transverse element at infinitely variable elevations and said one transverse element serving as the tent ridgepole; the others of said transverse elements being disposed parallel to said one transverse element with the studs thereof extending through the other holes in one each of said leg elements at opposite sides, respectively of said one transverse element, and nuts on the studs on said other transverse elements operable to clamp the said other ends of said leg elements against the ends of said other transverse elements; said frame being adapted to support a demountable fabric cover having its mid length supported by said one transverse element and having hems formed in its opposite ends and in the sides thereof adjacent to the ends of the cover through which one each of said other transverse elements and said leg elements, respectively, extend when the cover is mounted on said frame structure.

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