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TENT-ROOF

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Fig. 1

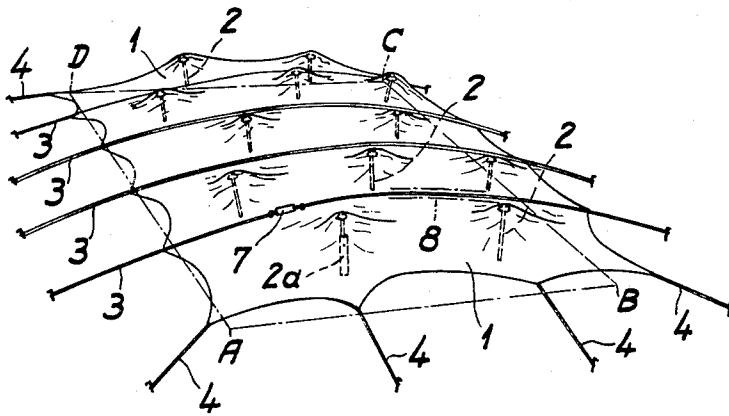
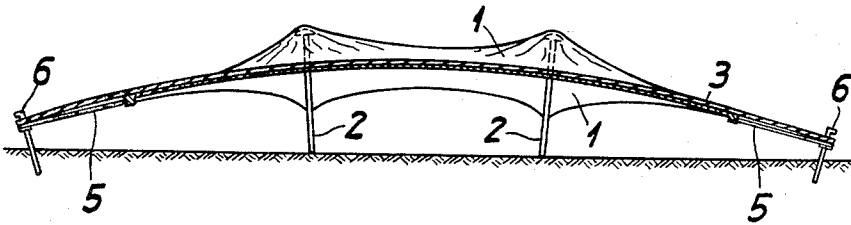


Fig. 2



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TENT-ROOF

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2 Claims. (Cl. 135-1)

The present invention relates to a tent roof construction suitable for tents of all kinds. Tent roofs are already known in which the tent-cloth of the roof is encircled by tension ropes in a wide curvature, whereby the anchoring of these tension ropes is made at low positioned fixed points outside of the covered surface. In such tent roof constructions the tent roof cloth is supported within the covered space by supporting ropes which sag downward. These supporting ropes are fastened at the edge of the covered space to high fixed rope supports, sturdy gable pillars or the like. Such anchorings of the supporting ropes require considerable construction and, therefore, are expensive.

The present invention relates to a tent roof with supporting props arranged in rows within the covered space and with tension ropes curved over this space, which press the tent roof cloth onto the top of these supporting props. The novelty and the progress consists, in this case, in the fact that the tension ropes lying over the tent roof cloth are placed between the rows of supporting props in such a way that they form valleys between the hump rows caused by the supporting props so that in these valleys the rain water is collected and drained off. The supporting props are relatively light construction elements; essentially they are only under pressure or buckling strain. The known expensive rope supports or the like are thus completely eliminated by the invention.

Other objects and advantages will be apparent from a consideration of the specification and claims.

FIGURE 1 shows a tent roof seen from above, and

FIGURE 2 shows an enlarged section through a tent construction along a tension rope.

According to FIGURE 1 the tent cloth roof 1 covers approximately the rectangular ground surface A—B—C—D. The tent cloth roof 1 is carried, according to the invention, by a number of supporting props 2, which are arranged e.g. in five rows of two or three each. In the shown embodiment the tent cloth roof 1 is held by four tension ropes 3 in such a way that they cover the covered space in a wide downward concave curvature. Thus the tent cloth of the roof 1 is subdivided into a number of partial areas in such a way that between the tension ropes hump-like projections appear, which are caused by the upper end of each supporting prop 2. By ropes 4 the ends of the tent cloth of the roof 1 are fastened to tent pegs or the like in the usual manner. The neighbouring rows of carrying props 2, separated from each other by tension ropes 3, are conveniently arranged in an offset manner, as can easily be seen from FIGURE 1.

The length of the carrying props 2 is adjustable. This is done by manufacturing them from tube parts which can be shifted in the manner of a telescope. As an example one of these supporting props is shown in FIGURE 1 as an extendable telescope prop (2, 2a). The tops of the carrying props 2 have approximately the

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form of a mushroom, whereby an excessive strain on the tent cloth is avoided. The ropes 3 can be tensioned by turnbuckles. In FIGURE 1 such a turnbuckle 7 is shown schematically. Instead of single tension ropes 3 it is also possible to use groups of tension ropes. According to the invention tension ropes are preferably used, whose elastic elongation is 1.75 times as great as that of a parallel wire strand under the same load, which consists of the same wire material and has the same weight per unit of length. The tension ropes 3 can be manufactured of helicoidally wound single strands or wires or they can be very extensible tressed strands or they may contain particularly elastic cores, so that a high elasticity is reached. In order to avoid damage to the tent cloth roof 1, it is provided to reinforce the said cloth by very tough and weather-proof tapes 8 in the range where the tension ropes 3 repose, as shown partially and schematically in FIGURE 1.

As seen in FIGURE 2, the lateral edges of the canvas forming the roof 1 are tied down to pegs 6 by special ropes or tension elements 5 adjacent to the ends of the ropes 3 which are also made fast on the pegs 6. The purpose of this is to avoid excess strain on the tent-cloth. Since the supporting props 2 and the tension ropes 3 act on different and spaced parts, the tensioning forces act on all areas of the tent-cloth roof and in all directions. Thus relatively great surfaces can be covered in a flat manner by tent cloth or the like simply and without any difficulty. The outer appearance of the roof according to the invention, viz. the rows of hump-shaped projections caused by the supporting props 2 and the valleys caused by the tension ropes 3, make it clear that the tent cloth is under tension in all of its parts and that each spot of the surface has a double curvature. This is advantageous according to the modern theory for membrane supporting devices. Thus the tent-cloth can never flutter in any place. Waterbags are also avoided by the invention. The tension ropes 3 can be more or less curved and the supporting props 2 can be of different heights. The number of props and their distance from each other depend upon the construction problem at hand and upon the material to be used for the roof. By the tent roof construction according to the invention very great surfaces can be covered in a very flat manner, whereby unnecessary high building elements are completely avoided. All the roof edges slope towards the ground, so that the new configuration of the tent roof is also advantageous in an aerodynamic respect.

It has been provided to give the roof tent-cloth an increased resistance at places of particular tension. The webs of material which can be extended and loaded particularly in one special direction are cut out and put together in a special manner. The tension ropes may be tensioned by weight-actuated tensioning devices which are known per se. The invention is not limited to rectangular ground surfaces, but can be used over any surfaces. The anchoring of the tension ropes can also be effected at already present pillars, walls, dams or the like. A further embodiment can be provided by an elastic arrangement of the supporting props 2 in their longitudinal direction.

What I claim is:

1. A tent comprising a plurality of poles arranged in substantially parallel rows, canvas laid over the tops of

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said poles, and ropes laid over said canvas between and in planes parallel to said pole rows, the ends of said ropes being fixedly connected to the ground at a lower elevation than the top of said poles for pulling the canvas down onto the pole tops and depressing the canvas by the ropes between the rows of pole tops, the canvas being exclusively supported by the poles and tensioned by said ropes.

2. A tent as defined in claim 1 wherein the poles forming a row are placed in staggered relation with respect to the poles of a neighboring pole row.

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