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PORTABLE SELF-SUPPORTING TENT

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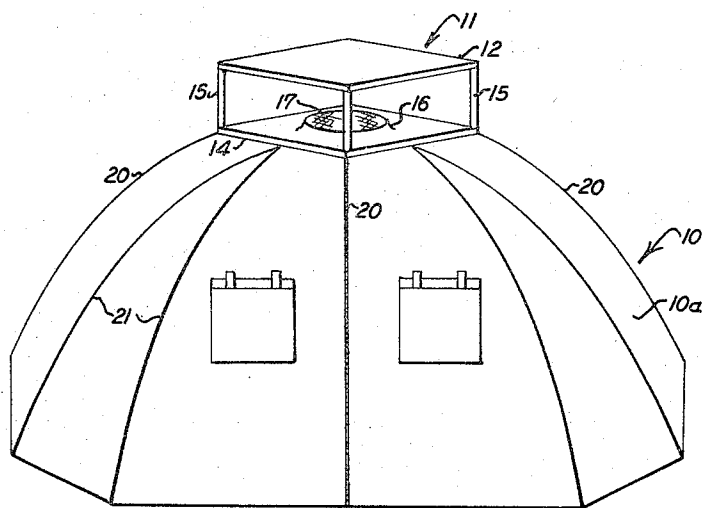


FIG. 1

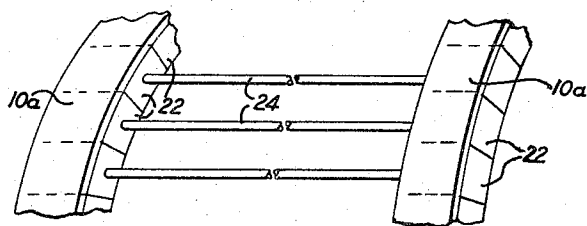


FIG. 2

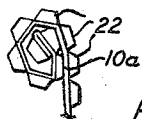


FIG. 3

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PORTABLE SELF-SUPPORTING TENT
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ABSTRACT OF THE DISCLOSURE

A tent structure supported by supporting members comprised of sections hinged together to be limited in relative movement in one direction when the supporting member is in a rigid supporting position, and at the same time turnable in a second direction so that the supporting members may be rolled in such direction. The hinge means between sections extend in a somewhat biased rather than normal direction from the direction the supporting member extends so that the supporting member rolls into a helix rather than a coplanar spiral. A casing at the top of the tent receives the rolled tent together with rolled supporting members. When the tent is set up, the casing functions as a vent; when the tent is rolled, the casing is its container.

This invention relates to tent structure which is self-supporting and folds into a casing for convenient carriage.

It is an object of this invention to provide a tent which is supported by a plurality of limiting members, permanently affixed to the tent, which can be conveniently rolled with the tent material in a direction opposite their tent supporting disposition.

A further object of the invention is the provision of a casing at the top of the tent which serves as a weather protected vent when the tent is in use and as a tent container for carrying same.

Other objects, adaptabilities and capabilities will appear as the description progresses, reference being had to the accompanying drawings, in which:

Brief description of the drawings

FIG. 1 is a perspective view of the tent in accordance with the invention;

FIG. 2 is a fragmentary detail view of the limiting members affixed to the tent;

FIG. 3 is a fragmentary side view of limiting members partially rolled back.

Description of the preferred embodiment

In FIG. 1 the tent 10 has attached thereto at the top a carrying casing 11 which includes two polygonal plate members 12 and 14 joined by a plurality of connecting parts 15. The lower plate 14 includes an upstanding flange 16 around a screen covered opening 17.

The tent has a plurality of zippers 20, one of which extends downwardly from the corner of each plate 15.

As shown in FIG. 2, firmly attached to the fabric 10a either directly or indirectly, at the corners 21 of tent 10 are a plurality of limiting members comprising segments 22. When the tent is in use as shown in FIG. 1, the segments cooperate to form approximately an inverse

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catenary curve and function as support members of the tent. It will be appreciated, however, that the segments which are connected in pairs by cross bars 24, converge from the bottom to the top and the face connected to the tent fabric is a parallelogram rather than a rectangular geometry. This permits the segments to be rolled so they are disposed beside each other rather than on top of each other, as indicated in FIG. 3, and thus the tent material can be rolled into the casing 11 without being unduly thick because of the presence of the supporting members.

While I have described the preferred embodiment of my invention, it is to be understood that it is capable of other adaptation and modifications within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A collapsible tent comprising yieldable material and an arc shaped frame firmly connected to said yieldable material, said frame comprising a plurality of aligned segments each connected on one side to said yieldable material whereby said segments limit movement of said yieldable material in one direction into substantial alignment and permit pivotal movement in the other, wherein the faces of said segments connected to said yieldable material are of parallelogram geometry, said frame being rollable in one direction into substantially a helical form.

2. A collapsible tent in accordance with claim 1, including container means affixed to said tent, said yieldable material together with said frame adapted to be rolled into said container.

3. A collapsible tent in accordance with claim 1, wherein said frame approximately conforms to the shape of an inverse catenary curve.

4. A container for a collapsible tent, said container permanently attached to the top of said tent and including an upper plate and spaced thereunder a lower plate, said plates connected by connecting means, said lower plate including a vent opening into the interior of said tent, said tent foldable into said container.

5. A foldable supporting member for a tent or other structure which comprises a plurality of aligned segments, hinge means connecting adjacent segments whereby they are turnable from the supporting condition of said supporting member with respect to each other in one direction only, the axes about which said segments are turnable being substantially parallel and at a bias to a direction normal to said supporting member in its unfolded supporting condition whereby said supporting member is foldable therefrom into a substantially helical form, said segments being in an abutting supporting condition when said supporting member is in its unfolded supporting condition.

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