

Sept. 1, 1964

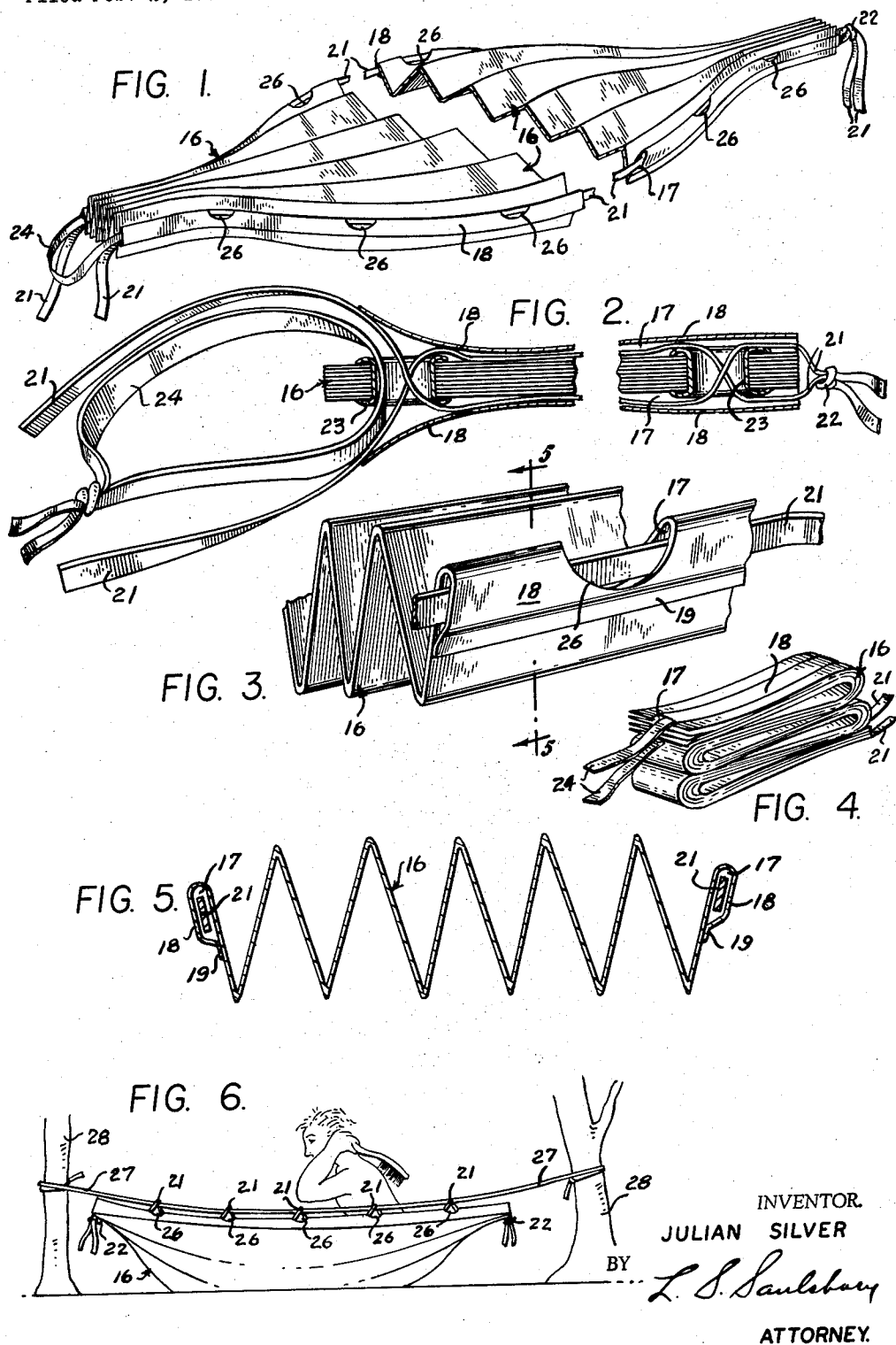
J. SILVER

3,146,784

PERIPHERALLY SECURED PLEATED SHROUDING

Filed Feb. 2, 1962

2 Sheets-Sheet 1



Sept. 1, 1964

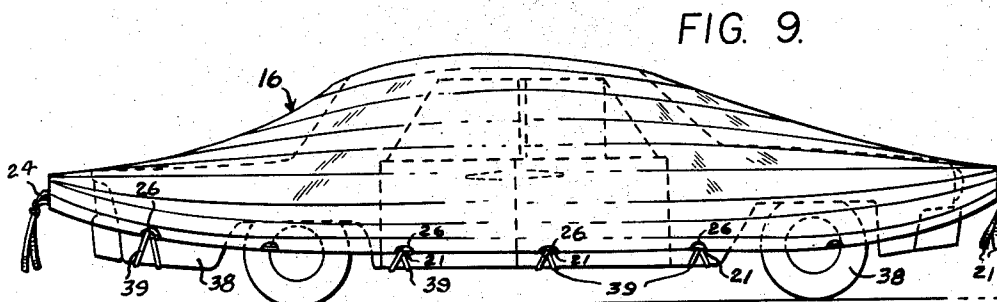
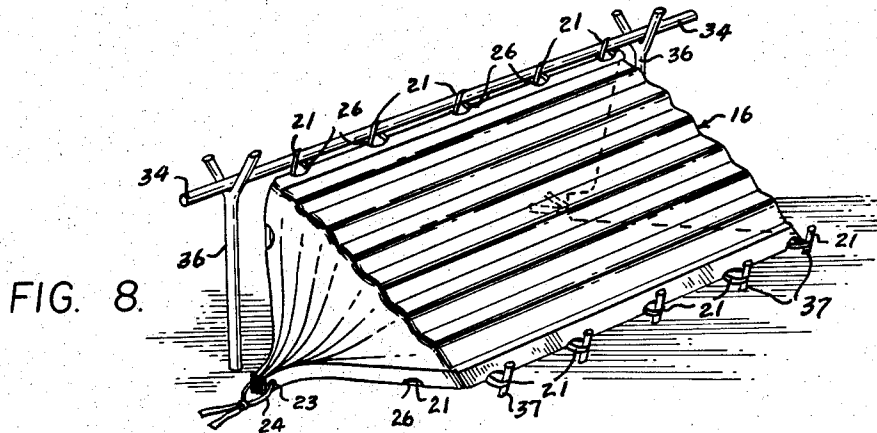
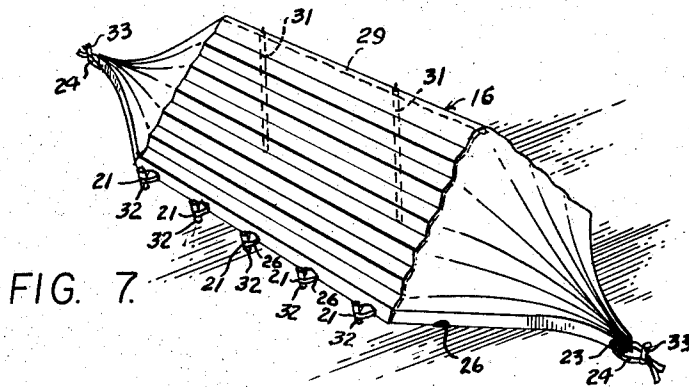
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2 Sheets-Sheet 2



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PERIPHERALLY SECURED PLEATED SHROUDING

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1 Claim. (Cl. 135-1)

This invention relates to a novel improvement in pleated collapsible shrouding or membrane which utilizes the geometry of pleating to provide a peripheral interrupted ducting capable of conveniently converting the shrouding into a tent, protective cover, or camping bath tub by the use of a cooperating draw strap.

In the prior art it is well known to use pleated shrouding, and to use attachment eyelets, ropes, or straps to secure the pleated covering to sundry objects.

The present invention discloses a novel construction of a pleated shrouding particularly adapted to extruded plastic heat-weldable shrouding in which the periphery of the shrouding is formed into a periodically apertured duct through which a single peripheral draw strap can pass and periodically emerge to engage ridge poles, tent stakes or the ropes thereby greatly enhancing the utility of the article as a tent, a bulk covering, or, in an inverted position, as a camping bath tub or wash basin.

This inexpensive, easily fabricated construction, by proper choice of aperture shape and frequency can allow the stresses between the shrouding and the objects to which the shrouding is to be secured to be distributed over the entire periphery of the shroud by the coupling action of the single peripheral strap passing through this duct and its interrupting apertures.

The principal object of the invention is to provide an inexpensive collapsible shrouding which can be rapidly and easily secured at its periphery to ridge poles, tent stakes, or ropes with a minimum of tying or manipulation.

It is another object of the present invention to provide a compact novel folding tent design characterized by rapid and simple assembly and disassembly.

It is still another object of the invention to provide a design of collapsible wash tub which is sturdy and inexpensive to manufacture.

It is a further object of the invention to provide an inexpensive means compatible with pleated shrouding for constructively securing it to objects to be covered thereby.

For other objects and a better understanding of the present invention reference may be had to the following detailed description taken in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a pleated collapsible shrouding incorporating the present invention and broken away to show the peripheral draw strap passing through its apertured duct,

FIG. 2 is a longitudinal sectional view in part of the folded pleating showing the circuit of the peripheral draw strap,

FIG. 3 is an enlarged view of the partially opened pleated shrouding broken away to show the detailed construction of the duct and its apertures,

FIG. 4 is a perspective view showing the pleated shrouding in folded form,

FIG. 5 is a transverse cross sectional view of the pleating and ducts as seen through 5-5 of FIG. 3,

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FIG. 6 is a perspective view showing the ease of application of the subject design to a camping bath or wash tub,

FIG. 7 is a perspective view of a tent formed from the subject pleated structure and secured to the ground by tent pegs embraced by the peripheral draw strap,

FIG. 8 is a perspective view of a lean-to shelter formed by cooperation of the subject shrouding design with a ridge pole and tent pegs, and

FIG. 9 is a perspective view of the pleated shrouding peripherally secured as the cover of an automobile.

Referring to FIGS. 1 through 5, 16 is a longitudinally pleated rectangular shrouding film preferably extruded from polyethylene, although many other materials are equally feasible. A channel or duct 17 is formed along each of the opposite edges of pleated shrouding 16 by the folding back of flap 18 and its secureance along the seam 19 to the shrouding 16 by heat sealing, stitching or adhesives. Ducts 17 may also be integrally extruded as a part of the plastic shrouding 16.

A peripheral draw strap 21 passes through each duct 17, both being tied in a knot 22 at one end, and freely emerging at the other end. A grommet 23, FIG. 2, at each end of the shrouding clamps all of the pleats 16 together to facilitate the collapsing and folding of the covering into the configuration shown in FIG. 4.

A strap 24 passing through grommet 23 is provided for anchoring one end of shrouding 16 so that one man can effect the collapsing and folding operation.

A series of arcuate apertures 26 are provided at spaced intervals along each side of flap 18 so as to give external access to the draw strap 21. The form of these apertures is designed to prevent stress concentrations between the edge of aperture 26 and strap 21 as the latter emerges to engage an anchoring pole, peg, or rope.

Referring now to FIG. 6, it may be seen that a pair of catenary support ropes 27 have been strung between two upright support members 28, in this case trees, and that shrouding 16 has been suspended from cables or ropes 27 by passing ropes 27 through peripheral draw strap 21 at each aperture 26 on both sides of shrouding 16, so as to form a bath or wash tub capable of sustaining a substantial water load. After so threading by ropes 27 the draw strap 21 has been tied at its free ends to permit the tension in strap 21 to support duct 17 at each aperture 26.

Referring now to FIG. 7, the subject shrouding 16 has been formed into a tent supported on a ridge pole 29 and tent poles 31. The periphery of the tent is secured to the ground in spaced relation by the engagement of draw strap 21 to a plurality of tent pegs 32. In addition, the ends of the shrouding 16 are secured to the ground by the engagement of a strap 24 with the end tent pegs 33.

In FIG. 8, a lean-to shelter has been formed from pleated shrouding 16 by passing a ridge pole 34, supported by forked poles 36, through the draw strap 21 at the aperture positions 26 on one elevated side of shrouding 16. On the opposite lower side of shrouding 16, tent pegs 37 secure the shelter to the ground by their engagement with the lower circuit of draw strap 21.

Referring to FIG. 9, it may be seen that the pleated shrouding 16 has been secured at its periphery to the automobile 38 through the emergent draw strap 21 at the selected apertures 26.

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While various changes may be made in the detailed construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What is claimed is:

In a device of the kind described, an elongated collapsible rectangular membrane composed of a plurality of flexible pleats, a grommet at each end of the membrane clamping the ends of the pleats to each other, the end pleats each constituting a duct, said end pleats having apertures communicating with the ducts at spaced intervals therealong, straps loosely extending through the grommets at the ends of the membrane, in crossed fashion, then extending through the separate ducts and projecting outwardly of the ends of the pleats, said straps adapted to be pulled through the apertures in looped fashion for receiving a flexible fastening member, and another endless strap extending through the grommet at one end of

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the membrane for anchoring said end of the membrane to a support.

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