

[54] TENT ENCLOSURE

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[56] References Cited

UNITED STATES PATENTS			
2,114,061	4/1938	Robinson	135/1 R
3,488,085	1/1970	Wallace	296/27
3,519,306	7/1970	Young	296/27
3,545,461	12/1970	Carlson	135/1 R

FOREIGN PATENTS OR APPLICATIONS			
1,452,256	9/1966	France	135/14 V

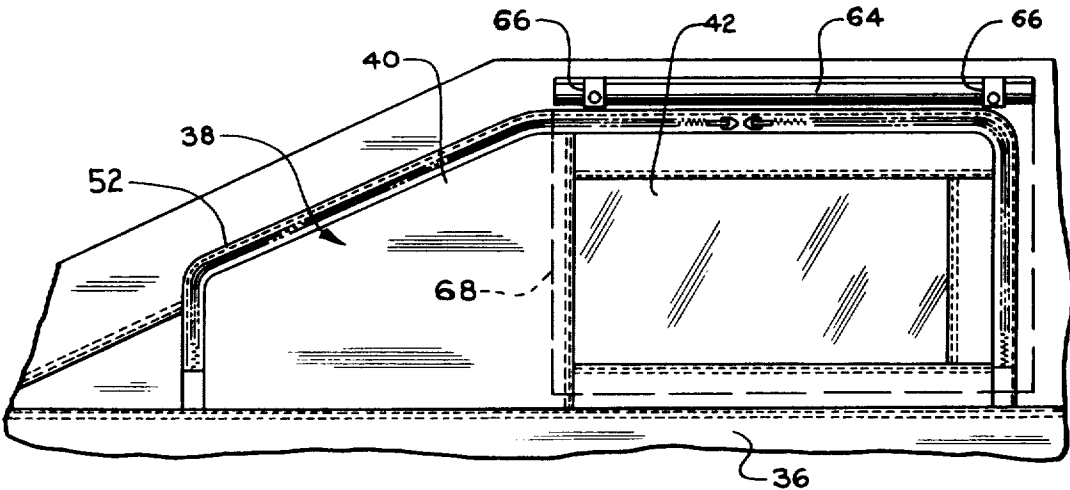
OTHER PUBLICATIONS
65-66 Winter Edition, "Gerry Mountain Climbing and
Camping Equipment," page 29, Boulder, Co.

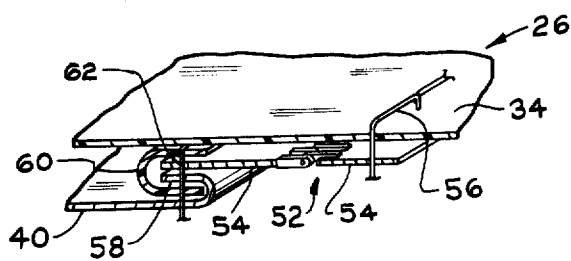
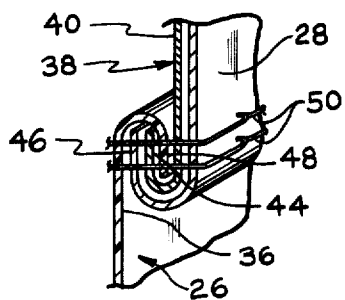
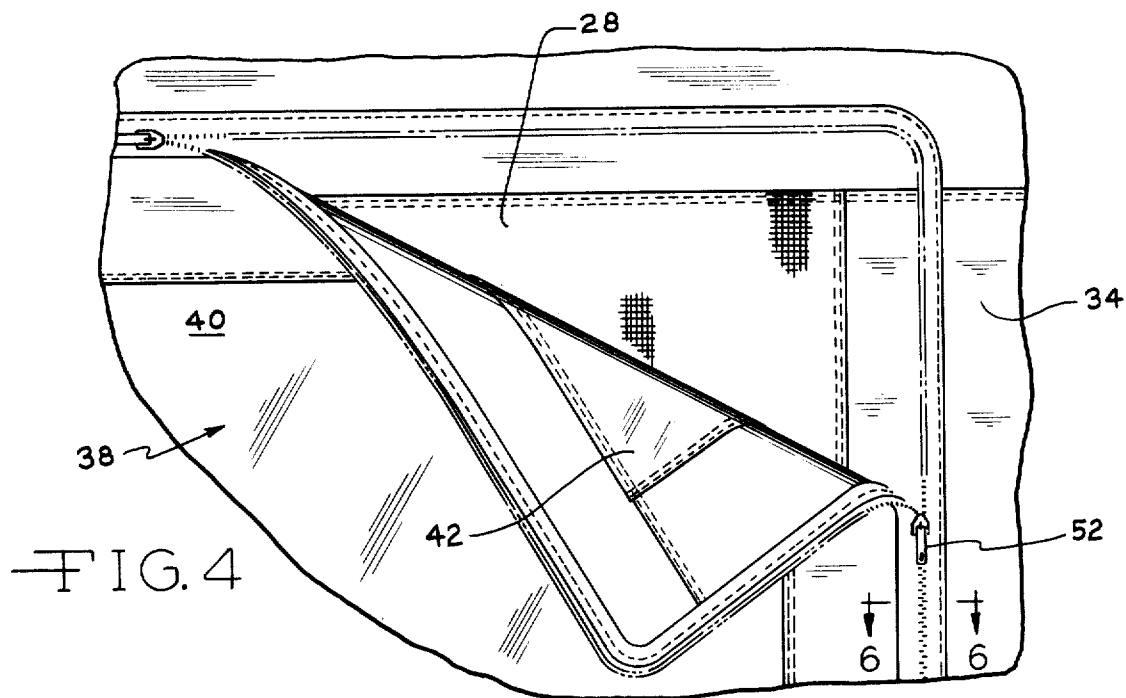
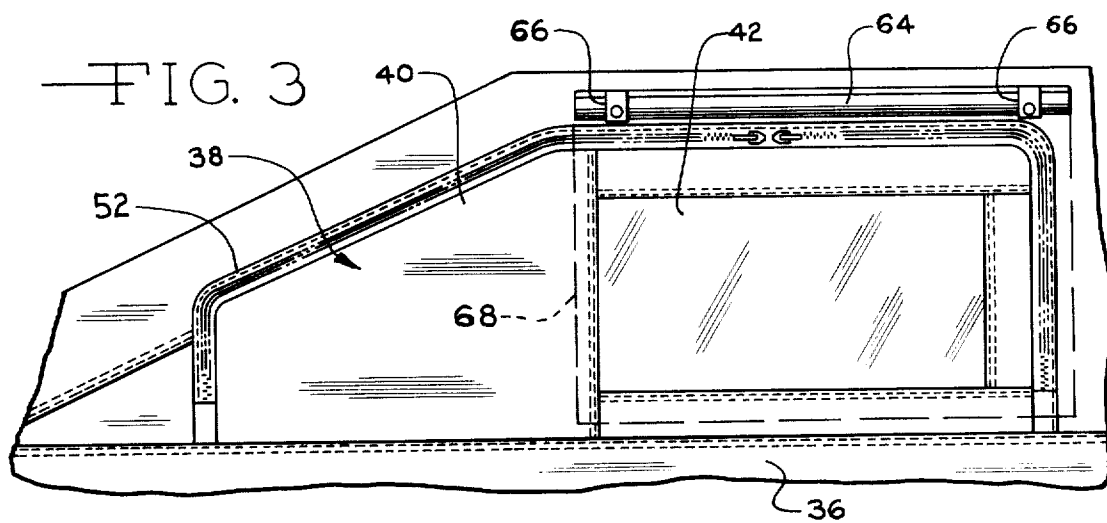
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[57] ABSTRACT

An improved design of a tent camper is provided. The tent camper includes a tent enclosure of a vinyl-coated fabric, such material being desirable because it is attractive, washable, and strong; however, it will not breathe. Hence, with the tent enclosure closed for a period of time, mildew and other moisture problems may result inside. To overcome this, weather flaps which are located inside the tent affixed to the walls thereof and positioned to cover insect screening in the walls are made of a breathable fabric which overcomes the moisture problem by permitting an indiscernible amount of air to enter and leave the tent without permitting a breeze to do so. The tent enclosure also provides an improved seam construction by means of which the weather flaps and the screen can be affixed together in a more secure connection with the side walls of the tent.

6 Claims, 6 Drawing Figures





TENT ENCLOSURE

This invention relates to a tent and more specifically to a fabrication design for a tent camper.

Tent campers are now in common use by many types of people. Such campers comprise a rigid box-like base mounted on wheels and over which a tent enclosure is erected at the campsite, with the enclosure extending beyond the ends of the box-like base to provide additional bunk space. The tent enclosure can be permanently attached to the base and carried within it when moving from one campsite to another. This provides an easily towed trailer and yet a camper which provides sufficient room and accommodations at a nominal price, as compared to larger camping trailers. In recent years, the tent enclosures have been constructed of vinyl, more accurately vinyl-coated fabric. This material has several advantages, including being washable or easily cleanable, attractive, and strong. A greater feeling of security is also provided to the occupants, particularly during storms and stronger winds. It has been found, however, that vinyl-coated fabric employed in tent enclosures does not breathe or permit air to pass therethrough, with the result that moisture and mildew constitute problems particularly if the tent is closed for a period of time.

In accordance with the invention, to overcome this problem, inner weather flaps of breathable woven material are employed to cover the insect screens in the walls of the tent enclosure. These flaps permit air to enter or leave the tent but not in such quantity as to be discernible or produce a breeze. This breathing is sufficient to overcome the moisture problem entirely, yet the advantages of an all vinyl tent are still achieved because the flaps are not directly exposed to the exterior, being behind the insect screen, giving the tent the attractive appearance of an all vinyl one. Further, with the flaps on the inside washability and strength are not important factors.

A privacy flap affixed to the side wall of the tent enclosure above the screening, and designed to cover a clear plastic window in the inner weather flap can also be made of the breathable woven material to maintain breathability within the tent camper even though the weather flap and the privacy flap are both in their closed positions.

In accordance with the invention, the tent enclosure construction also provides an improved seam for affixing the lower edge of the weather flap and insect screening to the side wall of the tent enclosure. This eliminates the tendency heretofore experienced for such seams to pull loose, particularly at the lower portions where the screen is subjected to more physical forces, as from children or animals. The new seam construction strongly connects the vinyl side wall of the tent with the lower edge of the screening and the lower edge of the inner flap to provide a secure and weather-proof construction, as will be discussed in more detail subsequently. The seam also provides yield or give for relative movement between the side wall and the flap.

It is, therefore, a principal object of the invention to provide an improved tent enclosure for a tent camper.

Another object of the invention is to provide a tent enclosure for a tent camper made of plastic-coated fabric and with portions being of a breathable woven material to overcome moisture problems encountered with an all plastic-coated fabric construction.

Yet another object of the invention is to provide a tent enclosure having side walls of a plastic-coated fabric and with inner flaps affixed to the side walls for covering insect screening therein, which flaps are made of a breathable woven fabric material.

A further object of the invention is to provide a tent enclosure having a side wall in which insect screening is mounted and with an inner flap for covering the insect screen, which screen and inner flap are affixed by a joint seam construction to an edge portion of the side wall of the tent enclosure.

Yet a further object of the invention is to provide an improved tent enclosure having plastic-coated fabric side walls containing insect screening, with a breathable inner flap behind the screening and with the flap and screening affixed by a joint seam construction with the plastic-coated fabric side wall.

Other objects and advantages of the invention will be apparent from the following detailed description of a preferred embodiment thereof, reference being made to the accompanying drawings, in which:

FIG. 1 is a somewhat schematic rear view in perspective with parts broken away of a tent camper employing a tent enclosure embodying the invention;

FIG. 2 is an enlarged detailed view in elevation of a portion of a side wall of the tent enclosure of FIG. 1;

FIG. 3 is a fragmentary view similar to FIG. 2 but showing the side wall from the inside;

FIG. 4 is an enlarged fragmentary view of a portion of the enclosure of FIG. 3, with a flap partly open and showing certain construction details thereof;

FIG. 5 is a somewhat schematic view in cross section taken along the line 5—5 of FIG. 2, and

FIG. 6 is a somewhat schematic view in cross section taken along the line 6—6 of FIG. 4.

Referring to the drawings, and particularly to FIG. 1, a tent camper embodying the invention is indicated at 10 and is shown from the rear, the opposite side being similar but with a door centrally located therein. The camper includes a lower, rigid box-like base 12 and a rigid top or roof 14, between which is a tent enclosure 16. The lower structure 12 includes side walls 18 and end walls 20 having extendable panels as bunk platforms 21 which provide bunk space beyond the ends of the structure 12. The rigid top 14 is supported by poles (not shown) from the lower structure 12, with the top in turn helping to support the tent enclosure 16. The entire enclosure 16 can be retracted into the lower housing structure 12 and the top lowered thereover to provide a low-slung trailer which will not affect the rear view of a driver or be affected to any degree by wind, so that the camper 10 can be readily transported from one campsite to another. Further, the tent camper 10 is relatively low in cost as compared to a full size camping trailer having comparable floor space. The details of the tent camper do not form part of the instant invention and will not be discussed further.

In recent years, some tent enclosures have been made entirely of vinyl-coated fabric material, which is washable to enable the camper to be readily kept clean, with the lower structure 12 and the top 14 also being readily washable. The vinyl enclosure also provides a more attractive appearance and is strong and relatively stiff, to provide greater security in storms or strong winds.

The tent enclosure 16 embodying the invention includes roof panels 22 of vinyl-coated fabric and end

panels 24 of vinyl-coated fabric, which can also have screens therein, if desired. Further, a side panel 26 is of vinyl-coated fabric with large panels 28 of insect screening therein. The opposite end can be similar to the end 24 and the opposite side can be similar to the side 26, except for the spacing between the screening 28 being wider to accommodate the door centrally located on that side. With this construction it will be readily seen that all exposed panels, and particularly the roof panels 22, the end panels 24 and the side panels 26 are of a plastic-coated fabric construction to provide the aforementioned advantages. As shown more particularly in FIG. 2, the side panel 26 actually is made of several strips of vinyl-coated fabric, including an upper horizontal strip 30, diagonal end strips 32, triangular end pieces 33, a central vertical strip 34, and a lower, longitudinally extending, horizontal base strip 36.

Referring to FIGS. 3 and 4, the side wall 26 has inner weather flaps indicated at 38 affixed thereto at a lower edge and movable upwardly to completely cover the screens 28. Each of the inner flaps 38 comprises a panel 40 of a breathable woven material, which can be canvas or even drill cloth, and a clear, flexible window 42 suitably mounted therein to provide light and yet protection from the weather and the cold. The panel 40 provides breathability for the tent, enabling air to slowly move in and out thereof to overcome the aforementioned moisture problem which has heretofore existed with plastic or vinyl tents. Because the inner flap 38 is entirely behind the screening 28, as viewed from the outside, the overall tent enclosure 16 still has the appearance of an all-vinyl tent and has the other advantages thereof without the moisture problem. While the panel 40 does not have the washability and strength of the vinyl, this is not significant since the screen 28 helps protect the panel.

In accordance with the invention, the insect screening 28 and the inner weather flap 38 are both affixed to the upper edge of the lower side strip 36. Referring to FIG. 5, the lower edges of the screen 28 and the panel 40 are turned back on the inside to form U-shaped configurations with a screen edge 44 and a flap edge 46 received in a recess formed by folding back and out an upper edge 48 of the vinyl strip 36. This six layer lamination is then stitched together by suitable stitches 50 to provide a secure seam which substantially eliminates any pulling out of the lower edge of the screen 28, as has heretofore been a problem with the usual tent construction. A lower edge portion of the screen 28 is particularly subjected to forces due to its accessibility to children, dogs, and perhaps other animals.

Because the side wall 26 and the weather flap 38 are made of different materials, they are subject to differences in stretching and shrinking, relative to one another, particularly when encountering rain and variations in humidity. The seam construction at the lower edge of the panel 40 enables the panel to yield or give somewhat because of the doubled-back construction. The particular seam construction around the side and upper edges of the flap 38 also enables the panel to give or yield relative to the side wall 26. The upper and side edges of the weather flap 38 are affixed to the side wall 26 around the screen 28 by a zipper 52. The zipper 52 is affixed to the edge of the panel 40 and to the side wall 26 by a seam shown in FIG. 6. Accordingly, one

edge strip 54 of the zipper 52 is affixed to the side wall 26 by conventional stitching 56. However, the other zipper strip 54 is attached to a doubled-back edge 58 of the panel 40 by binding 60 and stitching 62. This doubled-back edge 58 of the panel 40 provides yield or give for the panel along the three edges enclosed by the zipper 52.

When it is desired to have privacy or shut out light through the flexible window 42, a privacy flap 64 (FIG. 3) can be let down. The privacy flap 64 is simply a rectangular flexible panel which is affixed to the upper horizontal vinyl strip 30 along stitching lines shown in FIG. 2 and is held in place by two snap straps 66. These are opened to enable the flap to roll down to the position shown in dotted lines 68 in FIG. 3, in which instance the entire window 42 is covered. The flap 64 is also made of breathable woven fabric to enable those portions of the breathable panel 40 which are covered by the flap to continue to breathe and to prevent the moisture problem. The privacy flap 64 can also be lowered when the weather flap 38 is down to provide privacy at the forward portion of the screening 28. At the rear, triangular area of the screen 28 a transverse flexible partition (not shown) is employed across the interior of the tent so that a person in a bunk to the left of that partition can enjoy air through the screen with occupants on the right of the partition still enjoying privacy afforded by the flap 64.

Various modifications of the above described embodiment of the invention will be apparent to those skilled in the art and it is to be understood that such modifications can be made without departing from the scope of the invention, if they are within the spirit and the tenor of the accompanying claims.

I claim:

1. In a tent camper, a rigid housing base, a pair of platforms extending outwardly from two opposite ends of said base, a rigid roof supported a predetermined distance above said base, a flexible enclosure including end panels extending upwardly from the outer edges of said platforms, roof panels extending outwardly from said rigid roof to said end panels, and side panels extending from upper portions of the base to said rigid roof, said side panels also extending to said end panels and to said roof panels, said panels being made of a non-breathable plastic-coated material, at least one of said side panels having a screened opening therein, an inner weather flap of breathable, woven fabric having an edge affixed to said one side panel and an opposite edge removably affixed to said back of said side panel around said screened opening, said flap having a clear, flexible sheet mounted therein, and a privacy flap having an upper edge supported above the screened opening, said privacy flap also being of a breathable, woven fabric.

2. A tent camper according to claim 1 characterized further by said weather flap having a lower edge affixed to said side panel and having upper edges removably attached to the side panel by zippers.

3. A tent camper according to claim 2 characterized by the lower edge of said inner weather flap and the lower edge of the screen being affixed to the side panel by a common seam.

4. A tent camper according to claim 2 characterized by said zipper being attached to at least one of said weather flap and said side panel by a yieldable seam to

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enable said weather flap and said side panel to move relative to one another.

5. In a tent camper, a rigid housing base, a pair of platforms extending outwardly from two opposite ends of said base, a rigid roof supported a predetermined distance above said base, a flexible enclosure including end panels extending upwardly from the outer edges of said platforms, roof panels extending outwardly from said rigid roof to said end panels, and side panels extending from upper portions of the base to said rigid roof, said side panels also extending to said end panels and to said roof panels, said panels being made of a non-breathable plastic-coated material, at least one of said side panels having a screened opening therein, the lower edge of said opening being formed by a continuous strip of the plastic material extending therealong,

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an inner flap of breathable, flexible woven fabric of a size exceeding the size of the screened opening, the lower edge of said flap and the lower edge of the screen being affixed to the upper edge of the continuous strip by a common seam, side and upper edges of said flap having zipper means affixed to said side panel above and to the sides of the screened opening, said inner flap being behind said screened opening for all positions of said inner flap whereby said enclosure gives an outside appearance of being constructed entirely of the non-breathable plastic material except for the insect screen.

6. A tent enclosure according to claim 5 characterized by a privacy flap having an upper edge affixed to the side panel above the screened opening, said flap also being of a breathable, flexible woven fabric.

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