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S. P. PAIR ET AL

3,445,134

COLLAPSIBLE CAMPER

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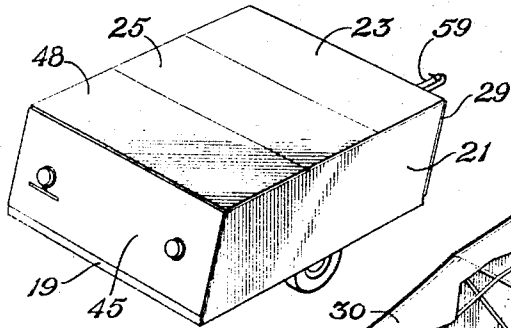


Fig. 1

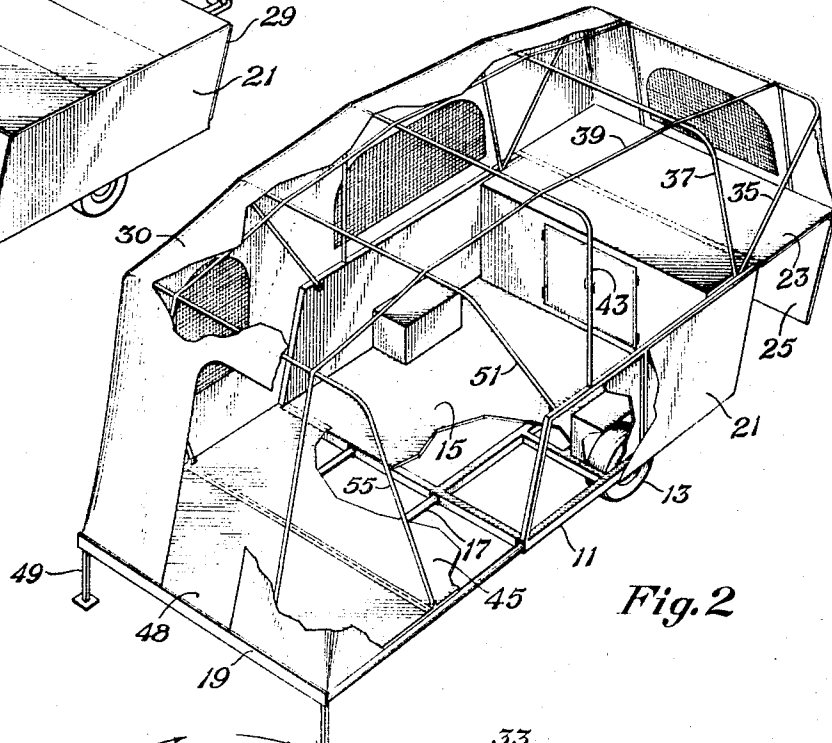


Fig. 2

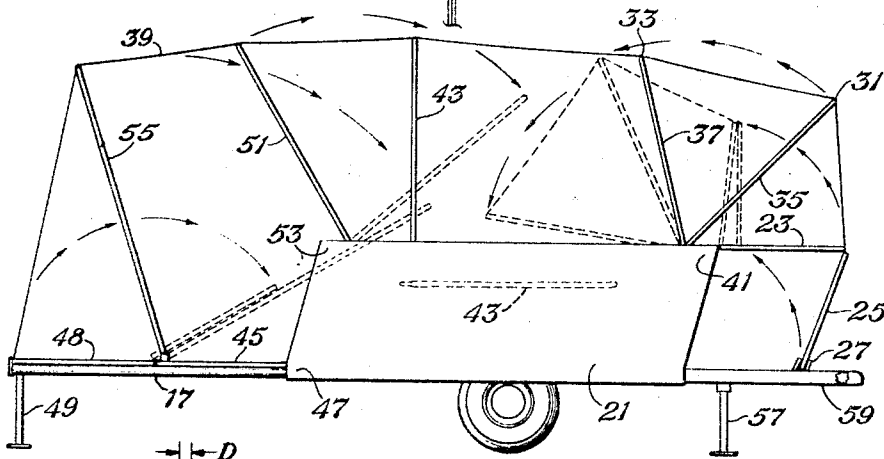


Fig. 3

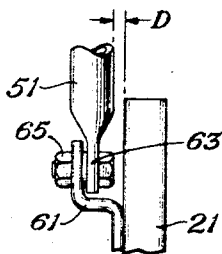


Fig. 4

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**COLLAPSIBLE CAMPER**

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11 Claims

**ABSTRACT OF THE DISCLOSURE**

Disclosed herein is a camper of the collapsible type having rigid side panels and foldable end and top panels. Pivotally connected top and rear panels fold backward to form floor extensions supported on a reciprocable frame extension member that moves between a retracted hidden position and an exposed extended position. Also, one top panel folds forward to extend the camper in that direction. Tubular support members are pivotally secured to selected ones of the panels, and a pliable covering is secured to these members to automatically expand with the top and end panels.

Previously, collapsible campers have been developed that retract to a low, compact profile for convenience during transportation from one location to the other, but which expand upon reaching the campsite to provide greater room and comfort. Ideally, a collapsible camper should be operable by only one person and capable of easy expansion. It would be preferable that the panels which form the ends and top of the camper when collapsed be secured to a collapsible, pliable covering and support members such that the camper is automatically expanded when the panels are expanded.

It is accordingly the general object of our invention to provide an improved collapsible camper.

Another object of our invention is to provide an improved collapsible camper which utilizes panel members, pliable material, and support means that are interconnected to automatically raise to the expanded position when the panels are expanded.

Another object of our invention is to provide a combination of panels that when opened form a floor extension supported on a frame extension member which is reciprocably carried by the frame to move between hidden and retracted positions.

Another object of our invention is to provide a manner of securing the pliable covering and support means of a collapsible camper to stationary side walls such that a space between the support means and the side walls enables storage of the pliable covering inside the collapsed camper without removal from the support means.

These and other objects are effected by our invention as will be apparent from the following description taken in accordance with the accompanying drawing, forming a part of this application, in which:

FIG. 1 is a perspective view of a collapsible camper embodying the principles of our invention as shown in the collapsed position;

FIG. 2 is a fragmentary perspective view of the camper of FIG. 1 shown in the expanded position;

FIG. 3 is a schematic side elevational view of the camper of FIGS. 1 and 2 when expanded;

FIG. 4 is a fragmentary elevational view of an attachment device used to support the tubular covering support means of the camper.

The numeral 11 in the drawing designates a frame which is carried by suitable wheels 13. The frame 11 sup-

ports a suitable, relatively stationary floor 15. Reciprocably mounted to the frame 11 is a frame extension member 17 which in this instance consists of four tubular members reciprocably received by the longitudinally extending members of the frame 11. A transverse end bar 19 extends across the extremity of the tubular members 17.

Extending upward from the sides of the frame are two side walls 21 which in this instance are in the form of parallelograms. A rigid panel 23 is pivotally and transversely secured to the upper, forward corners of the matching ends of the side walls 21. This panel may extend horizontally and is supported in such position by suitable means, in this instance by a vertical support panel 25 which is held stationary by a slotted positioner 27. Thus it may be seen that the panels 23, 25 are pivotally secured to each other and thus may be folded from the collapsed position shown in FIG. 1 to the expanded position shown in FIGS. 2 and 3. The front end of this particular camper when collapsed is formed of another panel 29 which is immovably secured to the front edges of the side walls 21.

Pliable collapsible covering means 30 has its forward edge secured to the outer edge of the panel 23 and inner regions 31 and 33 secured to the horizontal regions of generally U-shaped collapsible covering support means 35, 37. By way of additional support, longitudinally extending straps 39 extend from the forward edge of the panel 23 over the support means 35, 37 as shown in FIG. 2. The covering means may be secured to these straps by suitable means such as by sewing.

The support means 35, 37 are pivotally secured to the side walls 21 adjacent the upper and forward corner 41. When the camper is collapsed, the support members 35, 37 assume a generally horizontal position underneath the stacked panels 23, 25 which also assume horizontal positions as shown in FIG. 1.

For additional support of the pliable material, a removable support post 43 may be secured by suitable means (not shown) to side panels 21. When the camper is collapsed this support post may be manually removed and laid horizontally in the camper as indicated in phantom in FIG. 3.

A floor panel 45, hereinafter referred to as the second panel, is pivotally and transversely secured to the lower corners 47 on the opposite ends of the side walls 21 diametrically opposed to said upper corners 41. This panel forms a floor extension when expanded and forms the rear of the camper when collapsed, as shown in FIG. 1. Another floor panel 48 hereinafter referred to as the third panel, is pivotally secured to the outer edge of the second panel 45 to form when expanded a further floor extension of the camper when expanded and a portion of the roof of the camper when collapsed. Both the second and third panels 45, 48 are supported by the above described frame extension member 16 when expanded.

A pair of pedestals 49 are pivotally secured to the end of the frame extension members to provide stability to the camper. These pedestals pivot to a hidden horizontal position (not shown) so that they do not extend near the ground when the camper is in the collapsed position.

Another collapsible covering support means 51 is pivotally secured to the side walls 21 near their upper and rearward corner 53 on the end of the camper adjacent said second panel 45. The upper end of this support means is secured to the pliable covering of the camper in a somewhat central region.

Another support means 55 is pivotally secured near the outer edge of said second panel 45 and is secured to the pliable covering to define one elevated rear edge of the camper when expanded.

When the panels 45, 48 are collapsed the support means 55, 51 may assume a generally horizontal position within the camper.

A forward pedestal 57 may be provided in the interest of achieving rigidity of the structure and the forward extension 59 of the frame adapted to be conveniently attached to the trailer hitch of an automobile or the like.

Any suitable means may be utilized for securing the support means 35, 37, 51 and 55 to the various panels, one satisfactory approach being illustrated in FIG. 4 where the side panel 21 is shown with a bracket 61 extending therefrom. The flat end portion 63 of the support means 51 in this instance is secured by a suitable fastener 65 to the bracket 61. The width of the support means is narrower than the distance across the side walls to define a clearance space D for storing the pliable covering means 30 when the camper is collapsed, without necessity for removing the pliable covering means.

While we have shown our invention in only one of its forms it should be apparent to those skilled in the art that it is not so limited but is susceptible to various changes and modifications without departing from the spirit thereof.

The greatest increase in spaciousness of the camper when expanded is achieved by utilization of the rearwardly folding panels 45, 48 which automatically raise the support means 51, 55 and thus the pliable covering of the camper. It is not essential that the forward panels 23, 25 work in the above described manner since they do not add nearly so much space as the rearward panels. Thus they may be replaced, for example, with one panel which is raised to a vertical position with the canvas being secured to its outer edges. Also, the number and configuration of rearwardly expanding panels may be varied within the scope of our invention. The specific form of frame extension members shown is advantageous but may be varied to geometric forms other than the one disclosed. Thus, the principles of our invention may be utilized without need for using the specific number of panels and support means shown and a number of possible variations in this regard will appear to those of average skill in the art along with other possible modifications.

We claim:

1. A collapsible camper comprising:

- (a) a frame having wheels defining a longitudinal axis;
- (b) side walls carried by the frame;
- (c) a panel pivotally secured to matching upper corners of said side walls on an axis transverse to the longitudinal axis;
- (d) a second panel pivotally and transversely secured to the lower corners on the opposite ends of said side walls diametrically opposed to said upper corners to form a floor extension when expanded and the rear of the camper when collapsed;
- (e) a third panel pivotally secured to the outer edge of the second panel to form when expanded a further floor extension and a portion of the roof of the camper when collapsed;
- (f) a longitudinally reciprocating frame extension member carried by said frame below the second and third panel members to support said second and third panel members when expanded;
- (g) collapsible covering support means pivotally secured to said panels; and
- (h) pliable collapsible covering means secured to said support means and to the outer extremity of the third panel to raise the support means and cover the camper when the panels are expanded.

2. The collapsible camper defined by claim 1 wherein said frame extension member is telescopically carried within mating components of said frame, and pedestal supports depend from the outer extremity thereof to rigidly uphold said second and third panels.

3. The collapsible camper defined by claim 1 wherein said collapsible covering support means comprises:

- (a) one generally U-shaped covering support pivotally

secured near the outer edge of said second panel and secured to the roof of the covering to define one elevated outer edge of the camper when expanded;

(b) a second generally U-shaped covering support pivotally secured to the side walls near said upper corners on the end of the camper adjacent said second panel and to the covering to define a central support therefor; and

(c) a third generally U-shaped covering support pivotally secured to the side walls near said upper corners to define the opposite elevated outer edge of the camper when expanded.

4. A collapsible camper comprising:

- (a) a wheeled frame;
- (b) side walls carried by the frame;
- (c) at least one panel pivotally secured to selected matching corners of one end of each side wall;
- (d) collapsible covering support means secured to said panel and erected upon opening said panel;
- (e) at least one additional panel pivotally secured to selected matching corners of the opposite end of each side wall to form a floor extension of the camper when expanded;
- (f) collapsible covering support means secured to said additional panel and erected upon opening this panel;
- (g) pliable covering means secured to said panel and said support means and erected when the panels are opened;
- (h) a longitudinally reciprocable frame extension member carried by said frame below an associated panel to support said panel when expanded.

5. The collapsible camper defined by claim 4 wherein said frame extension member is telescopically carried by said frame to move longitudinally of the camper between a hidden position when retracted and an exposed position when initially expanded, and pedestal supports depend from the outer extremity thereof to rigidly uphold said second and third panels.

6. The collapsible camper defined by claim 4 wherein said first mentioned panel is secured to the upper and forward corner of each said side walls; the second mentioned panel is secured to the lower corners on the opposite end of the side walls to form a floor extension; and the frame extension member in its extended position supports said second mentioned panel.

7. The collapsible camper defined by claim 6 wherein a third panel is pivotally secured to the outer edge of said second mentioned panel to form a further floor extension supported by said frame extension member in its extended position.

8. A collapsible camper comprising:

- (a) a wheeled frame;
- (b) side walls carried by the frame;
- (c) at least one panel pivotally secured to selected matching corners of one end of each side wall;
- (d) at least one additional panel pivotally secured to selected matching corners of the opposite end of each side wall to form a floor extension of the camper when expanded;
- (e) collapsible covering support means secured to selected ones of said panels and said side walls and erected upon opening said panels, said means having a narrower width than the distance across the side walls to define a clearance space;
- (f) pliable covering means secured to panels and said support means and erected when the panels are opened, and fitting between said clearance space for storage when the camper is collapsed;
- (g) a reciprocable frame extension member carried by said frame below an associated panel to support said panel when expanded.

9. The collapsible camper defined by claim 8 wherein said frame extension member is telescopically carried by said frame to move longitudinally of the camper between a hidden position when retracted and an exposed position

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when initially expanded, and pedestal supports depend from the outer extremity thereof to rigidly uphold said second and third panels.

10. The collapsible camper defined by claim 8 wherein said first mentioned panel is secured to the upper and forward corner of each said side walls; the second mentioned panel is secured to the lower corners on the opposite end of the side walls to form a floor extension; and the frame extension member in its extended position supports said second mentioned panel.

11. The collapsible camper defined by claim 10 wherein a third panel is pivotally secured to the outer edge of said second mentioned panel to form a further floor extension supported by said frame extension member in its extended position.

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PHILIP GOODMAN, *Primary Examiner.*

U.S. Cl. X.R.

52—64; 135—1; 296—27