TENT/CANOPY AND HOUSING THEREFOR
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Filed Apr. 6, 1968. Ser. No. 719,607
Int. Cl. E04F 10/02
9 Claims

ABSTRACT OF THE DISCLOSE
A tent/canopy having a housing adapted for mounting atop a vehicle. The front of the housing is openable to expose a pair of looped straps adapted to support a pole horizontally. The fabric tent/canopy includes a substantially rectangular central portion, to respective edges of which are attached four rectangular flap panels. One edge of the central portion is provided with projecting tab members, the horizontal pole passing through grommets in the tab members, thereby supporting one edge of the tent/canopy. The opposite edges of the central portion is supported by tent poles storable within tubes situated in the housing. Additional tent poles may be used to support the flap panels horizontally, thereby providing a canopy.

BACKGROUND OF THE INVENTION
Field of the invention
The present invention relates to a tent/canopy and housing therefor. More particularly, the present invention relates to a fabric tent/canopy adapted to be supported as either a tent or a canopy, partial support being provided by attachment to a pole supported horizontally within the housing.

Description of prior art
With camping ever more popular, an increasing variety of tents, canopies and other equipment is available for the outdoor enthusiast. In general, each item of equipment is designed to meet a specific need. Thus, prior art tent and canopies are designed primarily to provide an enclosed shelter for sleeping and dressing. During daylight, as the temperature rises, the inside of such a tent may become unbearably warm, and for comfort it is desirable to employ a canopy or sunshade, rather than a tent. To this end, there are available various canopies which provide shade from the sun and which have open sides to permit the flow of cooling breezes under the canopy. Thus, to meet the needs of daytime and nighttime comfort, the camper often is forced to purchase and to transport with him both tent and canopy. This, of course increases substantially his camping equipment cost, and necessitates considerable space for storage and transportation of the equipment.

An additional problem of prior art tents is that they are difficult for a single camper to assemble. Typically, a complicated suspension framework must be set up, then a fabric pyramid suspended from the framework. The task is time consuming and generally requires more than one person.

To overcome these and other shortcomings of the prior art, the present invention provides a tent which is convertible to a canopy, which is readily stored in its associated housing, and which may be assembled and disassembled rapidly by one man. The inventive tent/canopy provides a completely enclosed tent structure for sleeping, and opens to provide a substantially planar, horizontal canopy as an open-sided sun shade during the day.

SUMMARY OF THE INVENTION
In accordance with the present invention there is described herein a tent/canopy and associated housing. The tent/canopy comprises a fabric member having a substantially rectangular central portion and four rectangular flap panels attached to respective edges of the central portion. A tab extending from each corner of the central portion is adapted to receive the upper end of a supporting tent pole. Extending from one edge of the central portion are a plurality of tab members each having a grommet therein.

The tent/canopy housing is adapted for mounting atop a vehicle and includes a bottom, a cover, a front, a back and two sides. One of the sides and the front are hinged to permit opening thereof. Extending from the bottom of the housing are a pair of looped straps adapted to support a pole substantially horizontally. This horizontal pole passes through the grommets in tab members extending from one edge of the tent/canopy central portion, thereby providing a partial support for the tent/canopy when the housing is mounted at an appropriate elevation, as for example, on the top of the vehicle.

The housing also contains a plurality of tubes adapted for storage therein of conventional tent poles. The poles may be used to support flap panels substantially horizontally, co-planar with the central portion, to provide a canopy. Alternatively, the flap panels may drape vertically to provide a tent. The flap panels are provided with zippers for edge-to-edge fastening of adjacent flaps, thereby completely enclosing the interior of the tent.

The removable cover of the tent/canopy housing may be provided with collapsible legs, so that when removed from the housing, the cover is convertible to a table.

Thus it is an object of the present invention to provide a combined tent and canopy. Another object of the present invention is to provide a tent/canopy having an associated storage housing adapted for attachment atop a vehicle.

Yet another object of the present invention is to provide a tent/canopy which may be assembled or taken down rapidly and by one person.

A further object of the present invention is to provide a tent/canopy partial support of which is provided by attachment to a housing mountable atop a vehicle.

BRIEF DESCRIPTION OF THE DRAWINGS
Still other objects, features and attendant advantages of the present invention will become apparent to those skilled in the art from a reading of the following detailed description of the preferred embodiment constructed in accordance therewith, taken in conjunction with the accompanying drawings wherein like numerals designate like parts in the several figures and wherein:

FIGURE 1 is an exploded view of the inventive tent/canopy, set up as a tent, and its associated housing. The housing is shown with its front and side open, and its top detached for conversion into a table.

FIGURE 2 is a perspective view of the inventive tent/canopy housing, the tent/canopy itself being stored within the housing.

FIGURE 3 is an enlarged fragmentary perspective view of one corner of the inventive tent/canopy also shown in FIGURE 1; the zipper for fastening edges of adjacent flap portions of the tent is illustrated in this view.

FIGURE 4 is a perspective view of the inventive tent/canopy set up as a canopy supported at one edge by the housing of FIGURE 2, the housing shown mounted atop a station wagon.

DESCRIPTION OF THE PREFERRED EMBODIMENTS
Referring now to the drawings and particularly to FIGURES 1, 3 and 4 thereof, the invention comprises a fabric tent/canopy 10 having a substantially rectangular
central portion 11 and four flap panels 12, 13, 14 and 15. Flap panels 12-15 are attached to central portion 11 along corresponding edges 12a, 13c, 14e and 15b thereof. Fabric tent/canopy 10 may be of unitary construction; alternatively, flap panels 12-15 may be formed independently and then sewn onto central portion 11 along the respective edges 12a-15b. Tent/canopy 10 may be of any appropriate fabric including, but not limited to, canvas, cotton, vinyl and the like.

Extending from the corners of central portion 11 of tent/canopy 10 are tabs 16a, 16b, 16c and 16d typically of a strong but flexible material such as cotton or Dacron webbing. Each of tabs 16a-16d is provided with an appropriate grommet 17 having a hole therein of diameter appropriate to receive the upper end 18 (see FIGURE 4) of a conventional tent pole 19. Typically, tent pole 19 may comprise two tubular members, one adapted to telescope within the other and to be set at a selectable length by tightening a thumbscrew. Typically, the upper end 18 of each convention tent pole 19 is of necked down diameter, and it is this necked down region which the hole in grommet 17 is adapted to receive.

Still referring to FIGURES 1, 3 and 4, the unattached edges 12b, 13b, 14b, and 15b of respective flap panels 12-15 each are provided with a plurality of loops 20 adapted for insertion therethrough of a conventional tent stake. Each of the corners of flap panels 12-15 adjacent respective edges 12a-15b, is provided with a grommet 21, having a hole of sufficient diameter to receive the upper end 18 of tent pole 19.

Extending from each corner of central portion 11 of fabric tent/canopy 10 is a zipper 22, most clearly evident in FIGURES 1 and 3, and best illustrated by adjacent flap portions 13 and 14. A first set of teeth 22a of zipper 22 is attached to one edge of flap panel 13, and a second set of teeth 22b is attached to an edge of adjacent flap portion 14. Thus, when the inventive tent/canopy 10 is set up as shown in FIGURE 1, zipper 22 may be used for edge-to-edge fastening of flap panels 13 and 14 into the tent-like configuration shown.

As best illustrated in FIGURES 1 and 4, edge 12a of central portion 11 is provided with a plurality of tab members 23, each of which may comprise a strong, flexible material such as cotton or Dacron webbing. Each of tab members 23 is provided with a grommet opening or hole 24 therethrough of diameter slightly greater than the maximum diameter of a conventional tent pole 19. As will be described in detail hereinbelow, tab members 23 are utilized when the inventive tent/canopy 10 is partially supported by its associated housing 25. Central portion 11 also comprises a reinforced region 26 adjacent its center, the function of which will be described hereinbelow.

The inventive tent/canopy includes an associated housing 25, best illustrated in FIGURES 1, 2 and 4, within which fabric tent/canopy 10 may be stored. Housing 25 comprises a front 27, a back 28, a side 29, and an openable side 30. Housing 25 also includes a bottom 31, and a detachable top or cover 32. As best shown in FIGURE 2, housing 25 may be provided with a plurality of fasteners 33, useful for attaching housing 25 to an automobile luggage rack 34, which rack may be supported on the top of a vehicle by means of feet 35.

The front 27 of housing 25 is attached to the bottom 31 by means of hinges 36, so as to be openable to the position illustrated in FIGURE 1. The side 30 of housing 25 is attached to back 28 by means of hinges 37, and is attached to the front 27 by means of hasps 38 and hinge 39. Thus, by removing hinge 39 from hasp 38, side 30 may be pivoted about hinges 37 to the open position illustrated in FIGURES 1 and 4.

The back 28 of housing 25 is attached to back 28 by hasps and hinges 40, and is attached to front 27 by hasps 41 and hinges 42. The inside 21a of cover 32 may be provided with a set of collapsible table legs 43 (evident in FIGURE 1) so that when cover 32 is removed from housing 25 and legs 43 set up, cover 32 becomes a table.

Referring now to FIGURES 1 and 4, housing 25 may be provided with a plurality of hollow tubes 44, preferably of plastic, each having an inner diameter sufficiently large so as to receive a conventional tent pole 19. Tubes 44 preferably are disposed adjacent bottom 31 and may be attached thereto adhesively or by any other appropriate means. The interiors of tubes 44 serve as storage locations for tent poles 19 when the tent poles are not in use. Housing 25 preferably is provided with thirteen such tubes 44.

As shown in FIGURES 1 and 4, attached to bottom 31, and extending upward within housing 25 are a pair of looped straps 45, each of which may comprise a strong but flexible material such as Dacron or cotton webbing. The loop 46 in each of straps 45 preferably is sufficiently large to permit a tent pole 19 to be inserted therethrough.

Referring now particularly to FIGURE 4, the inventive tent/canopy 10 is shown set up as a canopy, with one end of fabric central portion 11 supported by housing 25, which housing itself is mounted atop a station wagon or similar vehicle 47. A tent pole 19a is supported substantially horizontally by looped straps 45. Pole 19a extends through each of grommets 24 in tab members 23. With edge 12a of central portion 11 thus supported, it is unnecessary to use tent poles 10 for support of tabs 16c and 16d. Tent poles are used, however, to support tabs 16a and 16b, as well as to support flap portions 13, 14 and 15 in the horizontal canopy configuration of FIGURE 4. Conventional stake poles 48 and tie lines 49 are used to provide tension on the upper ends 18 of the various tent poles 19.

It will be appreciated that rather than supporting edge 12a of fabric member 10 as shown in FIGURE 4, two additional tent poles (not shown) may be used to support respective tabs 16c and 16d. The vehicle 47, with or without housing 25 attached, then may be driven over the campsite. With edge 12a supported by tent poles, flap portion 12 may be extended away from central portion 11, and its edges supported with two additional tent poles (not shown) to provide a canopy over a larger area than that shown in FIGURE 4.

Conventional of the inventive tent/canopy from the canopy configuration illustrated in FIGURE 4 to a tent configuration such as that shown generally in FIGURE 1 readily may be accomplished by removing tent poles 19 from each of the grommet holes 21 along the outer edges of flap panels 12, 13, 14 and 15 by cover 32. Central portion 12 remains substantially horizontally, supported by the tent poles associated with tabs 16a-16d. The flap panels then may be draped downward (as illustrated by flaps 13, 14 and 15 in FIGURE 1) to form sides of the tent, or alternatively, the flap portions may be folded back over the top of central portion 11, as shown typically by flap 12 in FIGURE 1. The downwardly extending flaps may be fastened at their adjacent edges by means of zippers 22, thereby providing a completely enclosed area within tent/canopy 10.

Loops 20 (see FIGURE 1) may be staked to the ground to prevent the flap panels from being blown by the wind. To prevent rain from accumulating atop central portion 11, a tent pole may be placed vertically within the tent so as to extend between the ground and reinforced region 26 of central portion 11. By adjusting the length of this tent pole to be slightly longer than the length of the tent poles used to support central portion 11, central portion 11 may be slightly pyramid, sufficient slant being provided so as to insures run-off of rain water.

An outstanding feature of the present invention is that the inventive tent/canopy may be set up or taken down very easily, typically by one man. For example, the tent/canopy 10 from the canopy position shown in FIGURE 4, the tent poles supporting edges 13b and 15b of
of said tabs being adapted to receive an end of a tent pole and attachment means for attaching one edge of said central portion to said supported pole.

2. The combination defined in claim 1 wherein said housing further comprises a substantially planar cover detachable from said housing and including collapsible table legs attached to the inside of said cover.

3. A tent/canopy combination comprising: a housing adapted for mounting atop a vehicle, the front of said housing being openable, supports means attached to said housing for supporting a pole substantially horizontally, said support means comprising at least two looped straps extending from the bottom of said housing adjacent said front, a fabric tent/canopy having a substantially rectangular central portion, said tent/canopy further comprising at least one flap panel, an edge of said flap panel being attached to a corresponding edge of said central portion, the width of each flap panel being substantially the same as the length of said corresponding edge to which said flap panel is attached, said tent/canopy further comprising zipper means extending from the corners of said central portion, for edge-to-edge fastening of adjacent flap panels, said tent/canopy further comprising a tab extending from each corner of said central portion, each of said tabs being adapted to receive an end of a tent pole, and attachment means for attaching one edge of said central portion to said supported pole, said attachment means comprising a plurality of tab members extending from said one edge of said central portion, each of said tab members having a hole therein, said tab members thus being adapted for through-hole engagement by said horizontally supported pole.

4. The combination defined in claim 3 further comprising a plurality of tubes disposed on the bottom of said housing, and wherein one side of said housing is hingedly attached to the back of said housing, whereby opening of said hinged one side permits insertion and removal of tent poles stored within said tubes.

5. A tent/canopy combination comprising: a housing adapted for mounting atop a vehicle, the front and one side of said housing being openable, said housing further comprising a plurality of tubes extending across the bottom thereof, said tubes each being adapted to receive a tent pole interiorly thereof, said housing further comprising a substantially planar cover detachable from said housing and including collapsible table legs attached to the inside of said cover, support means attached to said housing for supporting a pole substantially horizontally, said support means comprising at least two looped straps extending from the bottom of said housing, a fabric tent/canopy having a central portion, and attachment means for attaching one edge of said central portion to said supported pole.

6. The combination defined in claim 5 wherein said fabric tent/canopy comprises at least one flap panel, an edge of said flap panel being attached to a corresponding edge of said central portion.

7. The combination defined in claim 6 wherein the width of said flap panel is substantially the same as the length of said corresponding edge to which said flap panel is attached, said tent/canopy further comprising zipper means extending from the corners of said central portion, for edge-to-edge fastening of adjacent flap panels.

8. The combination defined in claim 5 wherein said central portion is substantially rectangular, said tent/canopy further comprising a tab extending from each corner of said central portion, each of said tabs being adapted to receive an end of a tent pole.
9. The combination defined in claim 5 wherein the front and one side of said housing each is openable, and further comprising a plurality of tubes extending across the bottom of said housing, said tubes each being adapted to receive a tent pole interiorly thereof.

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