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3,042,939

SLEEPING BAGS

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2 Sheets-Sheet 2

FIG. 6

FIG. 7

FIG. 5

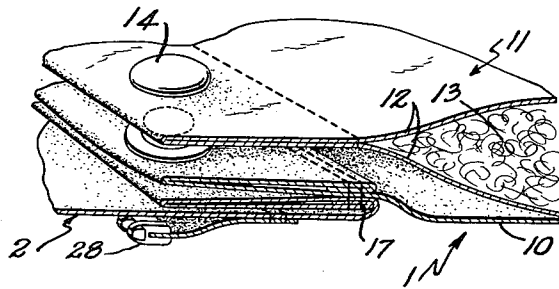
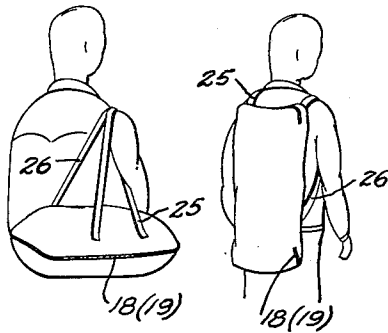


FIG. 8

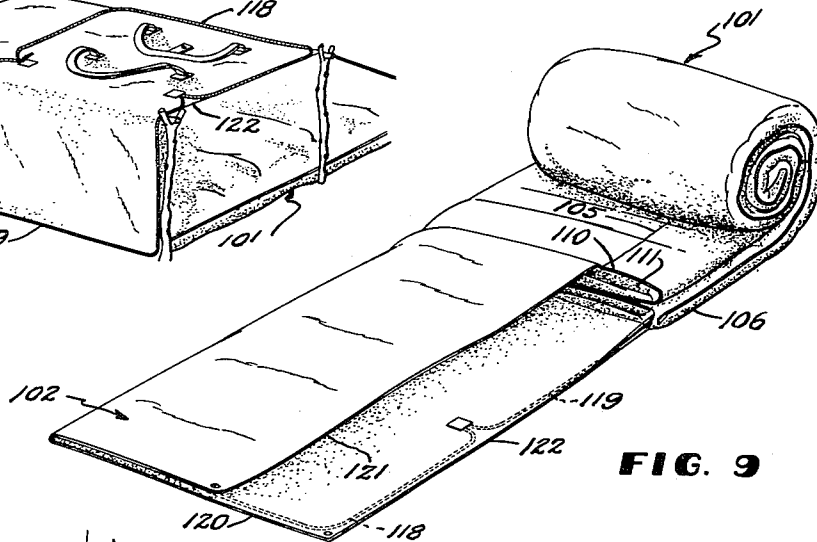
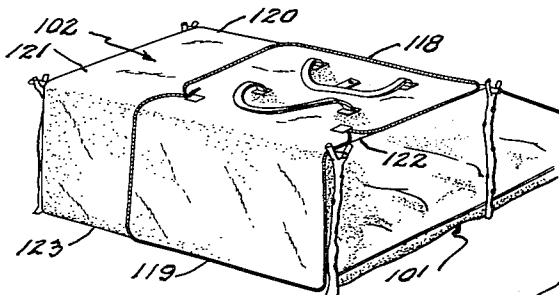


FIG. 9

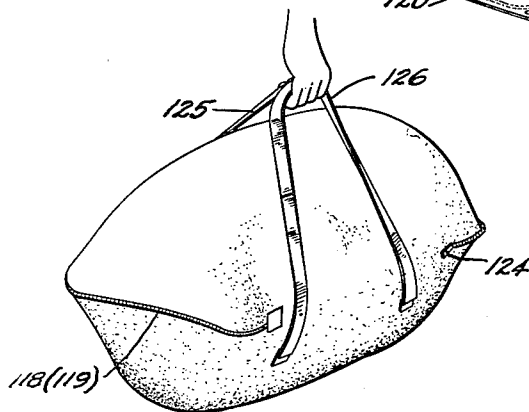


FIG. 10

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SLEEPING BAGS

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This invention relates to sleeping bags and more particularly to an improved sleeping bag which, when not in use, can be converted easily to compact, easily carried form.

Sleeping bags comprising a main body portion, or sleeping bag proper, to the head end of which is attached a cover sheet capable of being supported by stakes or the like to provide a canopy over the head of the user, are well known and widely used. Ordinarily, the main body portion of such a sleeping bag comprises a relatively thin layer of waterproof sheet material and a relatively thick composite layer, in the nature of a blanket or comforter, which is ordinarily filled with down or a synthetic equivalent and provides softness and heat insulation, this combination being folded at least once so that both layers extend at least once beneath and once over the user. To be truly satisfactory in use, the composite layer must have considerable thickness and bulk. Accordingly, it is quite difficult to roll or fold the sleeping bag into compact, easily carried form and to retain the sleeping bag in such form once it has been attained.

Typically, such sleeping bags are simply rolled into a generally cylindrical bundle and the bundle then tied or strapped. While this procedure could be carried out with relative ease, and a compact roll would result, were the sleeping bag entirely of relatively thin material, it is difficult to roll and tie a sleeping bag made with bulky insulating material. Even when it is possible for a user, such as an experienced packer, to make the sleeping bag up into a satisfactory roll, straps or cords are unsatisfactory as means for retaining the roll. This is because the straps or cords tightly compress the bulky material in narrowly confined areas and the roll bulges markedly between adjacent straps or cords, so that an awkward, misshapen roll results.

It is accordingly a general object of the invention to devise a sleeping bag of the type referred to which can be rolled into a compact bundle and easily secured in that form.

Another object is to provide a sleeping bag of the type comprising a bulky main body portion and a head cover sheet attached to the head end of the main body portion, constructed in such fashion that the main body portion of the sleeping bag can be rolled, from one end to the other, and the resulting roll completely and tightly confined within the head cover sheet, the latter being fastened in a manner such that the bulky, rolled main body portion is positively and substantially uniformly compressed, throughout the length of the roll, by the head cover sheet.

A further object is to provide a sleeping bag so constructed that it can be rolled into a compact, smooth form, the sleeping bag being equipped with carrying straps so positioned that, when the sleeping bag is rolled and secured, the straps will be freely exposed to allow the bag to be carried easily in various different manners, as by hand, or suspended from one shoulder, or as a back pack.

Yet another object is to provide a sleeping bag, of the type comprising a bulky main body portion and a head cover sheet attached to the head end of the main body portion, so constructed that the main body portion can be rolled from the foot to the head thereof, and the resulting roll then stored within the head cover sheet by operating fastening means specially attached to the head

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cover sheet, the arrangement being such that the user is not forced to study out a special relationship between the rolled main body portion and the cover sheet but rather is required only to form the roll and secure the fastening means in obvious fashion.

In order that the manner in which these and other objects are attained, in accordance with the invention, can be understood in detail, reference is had to the accompanying drawings, which form a part of this specification, and wherein:

FIG. 1 is a perspective view of a sleeping bag, in accordance with one embodiment of the invention, illustrating the sleeping bag ready for use, as viewed from the foot of the sleeping bag;

FIG. 2 is a fragmentary perspective view of the sleeping bag of FIG. 1, as viewed from the head of the sleeping bag;

FIG. 3 is a perspective view of the sleeping bag of FIG. 1 in partially rolled condition with the head cover extended along the ground;

FIG. 4 is a perspective view of the sleeping bag of FIG. 1, in fully rolled condition and enclosed within the head cover, illustrating one manner in which the sleeping bag can be carried;

FIG. 5 is a fragmentary sectional view, greatly enlarged relative to FIGS. 1-3, taken on a line transverse to the junction between the head cover and the main body of the sleeping bag when the same is spread in the fashion seen in FIG. 4 and illustrating only those parts of the main body portion which are disposed to extend beneath the person occupying the sleeping bag and which are attached to the head cover sheet;

FIGS. 6 and 7 are perspective views illustrating additional manners in which the sleeping bag of FIG. 1 can be carried when fully rolled and enclosed within the head cover, and

FIGS. 8-10 are perspective views, corresponding respectively to FIGS. 2-4, illustrating a sleeping bag in accordance with another embodiment of the invention.

Referring now to the drawings in detail, and first to FIGS. 1-7 thereof, it will be seen that the embodiment of the invention here illustrated is a sleeping bag generally comprising a main body portion 1 and a head cover sheet 2. The main body portion has a foot end 3, a head end 4 and elongated side edges indicated at 5 and 6. The sheet 2 is secured to the head end of the main body portion, in a manner hereinafter described in detail, and is so dimensioned that a portion of the head cover sheet can be supported as a canopy, above the head end of the main body portion, to shelter the head of the user. Thus, as will be clear from FIGS. 1-3, head cover sheet 2 can be approximately square in plan shape and of a width equal to the effective width of main body portion 1 when the latter is in condition for use. With the head cover sheet so proportioned, the sheet can be supported in the usual fashion by horizontal sticks 7 and forked uprights 8, the sheet being held in tension by a pair of cords 9 each extending between an eyelet in the cover sheet and a small stake driven in the ground beside the sleeping bag.

Main body portion 1 comprises a thin, waterproof outer sheet 10 of fabric or the like and an inner blanket member indicated generally at 11. Blanket member 11 will, under most circumstances, be a quilted member formed of thin outer fabric sheets 12 enclosing any of the usual lightweight, bulky insulating materials, as indicated at 13. Thus, the insulating material 13 can be down or any of the synthetic fibrous materials commonly employed in place of down, or mixtures of such materials. Outer sheet 10 and blanket member 11 are at least substantially coextensive and, in plan form, ex-

tend for the length of side edges 5, 6 and for twice the width of the sleeping bag when the same is in the assembled condition seen in FIG. 1. At the head end 4 of the main body portion, blanket member 11 is attached to outer sheet 10, as by snap fasteners 14, FIG. 5. Outer sheet 10 and blanket member 11 are sewed together continuously along those edges thereof which, when the sleeping bag is in proper position for use, will be disposed along side edge 6 and foot end 3. Insulating material 13 is omitted from the edge portions of blanket member 11, to provide that member with a thin and highly flexible edge portion indicated at 15 in FIG. 1.

The combination of outer sheet 10 and blanket member 11 is adapted to be folded along that line which is to form side edge 5 of main body portion 1, so that one-half of the outer sheet and the blanket member will constitute a mattress portion, disposed beneath the user, and the other half of those elements will constitute a cover portion to extend over the user. A conventional, multiple element slide fastener 16 is employed to close the main body portion along foot end 3 and side edge 6, in a manner which is now standard practice in the art.

The head cover sheet 2 can be attached to head end 4 of main body portion 1 in any suitable fashion. Advantageously, the matching edge portions of outer sheet 10 and head cover sheet 2 are folded and stitched together, as indicated at 17, FIG. 5, so that the head cover sheet is permanently attached to that portion of outer sheet 10 which will, during use of the sleeping bag, be disposed under the person occupying the sleeping bag.

Because of this manner of attachment, one surface of head cover sheet 2 will always face the ground when the head cover sheet and the adjacent part of main body portion 1 are both spread upon the ground. Thus, see FIG. 3. The two tapes 18 and 19 of a conventional multiple element slide fastener are secured to said one surface of sheet 2. This can be accomplished by sewing the usual fabric portion of the slide fastener tape in the conventional manner. As will be evident from FIGS. 2 and 3, slide fastener tapes 18 and 19 combine to extend in the general form of a rectangle. Thus, tape 18 extends adjacent to and parallel with edge 20 of sheet 2 and also adjacent to and parallel with approximately one-half of opposed edges 21 and 22, terminating approximately at the centers of edges 21 and 22. Similarly, tape 19 extends adjacent to and parallel with edge 23 of sheet 2 and also adjacent to and parallel with approximately one-half of edges 21 and 22, tape 19 terminating at the ends of tape 18. Accordingly, the ends of this slide fastener are located on the transverse center line of sheet 2 so that, when the fastener is open, slider 24 thereof, FIGS. 1 and 2, will be disposed adjacent to edge 21 of sheet 2.

The sleeping bag is completed by a pair of carrying straps 25 and 26, both straps being secured at each end to that surface of head cover sheet 2 which faces the ground when the sleeping bag is spread upon the ground. Reinforcing tabs 27, FIG. 3, are sewed to sheet 2 and the ends of straps 25 and 26 are sewed to the head cover sheet each at the position of a different one of the reinforcing tabs. Advantageously, the four locations for tabs 27 are at the corners of a square and the square is centered within that half of head cover sheet 2 which is farther from edge 23. When the sleeping bag is to be stored or reduced to compact form for carrying, the sticks 7, uprights 8 and cords 9 are first removed and the sleeping bag is spread upon the ground, with main body portion 1 folded in half and slide fastener 16 closed. Main body portion 1 is then formed into a spiral roll so that, as seen in FIG. 3, foot end 3 is at the center of the roll and head end 4, attached to edge 23 of sheet 2 is at the surface of the roll. Though the resulting roll will be cylindrical, the bulky nature of insulating material 13 will cause the roll to be bulky and of substantial diameter. Rolling is then

continued until head cover sheet 2 forms part of the outer convolution of the roll and slider 24 appears in a convenient position. The user then simply grasps slider 24 and operates it conventionally to interengage the co-acting pairs of fastener elements 28 provided by slide fastener tapes 18 and 19. As a result of closing of the slide fastener, the rolled main body portion 1 is completely confined within head cover sheet 2 and the soft, bulky roll is uniformly and tightly compressed, throughout its length, by the head cover sheet, the latter now functioning as a container for the main body portion. If desired, sticks 7, uprights 8 and cords 9 can be rolled within the main body portion and therefore carried with the sleeping bag.

It will be apparent from the explanation immediately above that the user is not required to exercise any analysis or choice in rolling the sleeping bag and closing the container constituted by cover sheet 2. The user need only form the roll until slider 24 can be conveniently grasped, and then operate the slide fastener in a manner which is evident and well known.

Further, such operation will result in carrying straps 25 and 26 being automatically exposed for proper use, as will be clear from FIG. 4. The sleeping bag can then be carried as would a piece of luggage (see FIG. 4) or from the shoulder (see FIG. 6) or as a back pack (see FIG. 7). Carrying straps 25 and 26 can be made relatively long to facilitate suspending of the sleeping bag from the user's shoulder in the manner shown in FIG. 6. Then, when the sleeping bag is to be carried by one hand, this can be done as shown in FIG. 4, or the straps can be joined on the side of the rolled sleeping bag opposite that seen in FIG. 4 to effectively shorten the straps, in a manner which will be clear from a comparison of FIGS. 4 and 10. A tie tab 29, provided at each of its ends with one element of a conventional snap fastener, can be attached to the center of strap 25 to provide a means for connecting together the central portions of the two carrying straps.

FIGS. 8-10 illustrate a sleeping bag in accordance with another embodiment of the invention. Here, the sleeping bag again comprises a main body portion 101, and a head cover sheet 102, constructed and arranged precisely as are the corresponding elements 1 and 2, FIGS. 1-7. Head cover sheet 102 is equipped with a conventional slide fastener comprising the usual tapes 118 and 119 which again combine to extend in the plan form of a rectangle. Here, however, the rectangle generally defined by the slide fastener tapes is not centered upon the head cover sheet 102 but rather is displaced toward one edge thereof. Thus, while tape 118 extends along approximately one-half of the edge 122 of sheet 102, and also extends along edge 120, the tape extends for only approximately two-thirds of the latter edge and then turns to extend parallel with, but is spaced substantially from, the edge 121 of sheet 102, as will be clear in FIG. 8. Similarly, slide fastener tape 119 extends along one half of edge 122, along only approximately two-thirds of edge 123 and then turns to extend parallel with, but is spaced substantially from, edge 121.

When the sleeping bag of this embodiment of the invention is to be converted to compact, easily carried form, both body portion 101 and head cover sheet 102 are spread upon the ground. Starting at the foot of body portion 101, the body portion is then folded roughly in half, the fold being continued progressively toward the head end thereof. As this fold is made to approach the head end, the material of outer cover sheet 110 and blanket member 111 is so manipulated that edge line 105 does not coincide with edge 106, but is displaced inwardly therefrom, at the head end of the main body portion, as seen in FIG. 9. Such relative manipulation between cover sheet 110 and blanket member 111 is possible because the cover sheet is attached to the blanket member at the

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head end of the main body portion by disengageable snap fasteners. Before rolling of the main body portion is commenced, head cover sheet 102 is folded so that the portion thereof which does not carry slide fastener tapes 118 and 119 overlies the balance of the head cover sheet, as will be clear from FIG. 9. The main body portion is rolled and rolling is continued until slider 124 appears in a convenient position. The user then grasps the slider and closes the slide fastener, with the result that the rolled main body portion is now completely confined and tightly compressed within the head cover sheet 102 which is now effective as a container. The final compact form obtained is illustrated in FIG. 10.

As in the case of the embodiment of the invention described with reference to FIGS. 1-7, this sleeping bag is also provided with carrying straps 125 and 126. Here, however, the points to which the ends of the carrying straps are attached to the head cover sheet are centered about the approximate geometric center of one half of the rectangle defined by the slide fastener tapes 118 and 119 and therefore are not centered with respect to the corresponding half of the head cover sheet. Otherwise, the construction and mode of use of the carrying straps 125 and 126 are the same as hereinbefore described with elements 25 and 26.

From FIGS. 4 and 10, it will be understood that in both embodiments of the invention the combination of the cover sheet and its fastening means is effective not only to contain but to tightly and uniformly compress the rolled main body portion of the sleeping bag. Hence, the fully stored sleeping bag is not only unusually compact but also has the form of a smooth, substantially cylindrical body which is free from the bulging projections which always result when an effort is made to tie a sleeping bag with straps or cords.

It will be understood that the total outer diameter of the fully stored sleeping bag, as seen in FIGS. 4 and 10, is dependent upon the spacing between those portions of the slide fastener tapes which extend parallel to the head end of the main body portion of the sleeping bag. In both embodiments, this space is made such that the outer diameter of the container formed by the head cover sheet when the slide fastener is closed is markedly less than the outer diameter of the roll into which the main body portion is made. Accordingly, the single act of closing the slide fastener not only completely encloses the rolled main body of the sleeping bag but also causes the same to be placed under a substantial compressive force distributed uniformly over the roll.

While particularly advantageous forms of construction have been chosen for illustration, it will be understood that various changes and modifications can be made therein without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. In a sleeping bag, the combination of a main body having a head end and a foot end and comprising a mattress portion adapted to be disposed beneath the user and a cover portion, to extend over the user, said portions being constructed of such relatively thick material, when said main body is folded once and rolled from foot to head with said cover portion initially overlying said mattress portion, that a soft but bulky roll results which is of such relatively large diameter as to be inconvenient for carrying and storage, a rectangular head cover sheet secured to the head end of said main body, said rectangular cover sheet having a length such that part of said sheet can be supported substantially horizontally well above the head end of said main body to shelter the head of a person occupying the sleeping bag when the

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bag is in use; and having a width equal to the width of said mattress portion when the bag is occupied, and fastening means for securing said sheet in the form of a container to completely enclose said main body when the latter has been folded once from its occupied position and is formed into a roll with said foot end at the center of the roll and said head end at the outside of the roll, said fastening means comprising a series of similar coacting fastening elements secured to said cover sheet, in the plan form of a rectangle, at least three legs of the rectangle thus formed being parallel with and immediately adjacent to a top, a bottom, and one side edge of said cover sheet, with the fourth leg parallel with and spaced from the remaining side edge of said cover sheet so that when said sheet is extended about the once folded rolled main body as an extension of the roll, said pairs of fastening elements can be engaged to secure said sheet to tightly compress the main body to form a smooth, substantially cylindrical body which is free from bulging projections, and has a length shorter than the occupied width of the mattress portion.

2. In a sleeping bag, the combination of a main body having a head end and a foot end and comprising a mattress portion adapted to be disposed beneath the user and a cover portion, to extend over the user, said mattress portions being constructed of relatively thick material, a rectangular head cover sheet secured to the head end of said main body, said rectangular cover sheet having a length such that part of said sheet can be supported substantially horizontally well above the head end of said main body to shelter the head of a person occupying the sleeping bag when the bag is in use; and having a width equal to the width of said mattress portion when the bag is occupied, and fastening means for securing a portion of said sheet in the form of a container to completely enclose said main body when said main body has been folded inwardly only once along its length to a width which is substantially less than the occupied width of said main body and has been formed into a roll with said foot end at the center of the roll and said head end at the outside of the roll, said fastening means comprising a series of similar coacting fastening elements secured to said cover sheet in the plan form of a rectangle, with at least three legs of the rectangle thus formed being parallel with and immediately adjacent to the edges of said cover sheet and with the fourth leg at least parallel with the remaining edge of said cover sheet, said fastener rectangle having a length equal to the length of said cover sheet and a width greater than one-half the width of said cover sheet but less than the entire width of said cover sheet, so that when said sheet is turned inwardly at one side along said fourth fastener leg and is extended about the once-folded and rolled main body as an extension of the roll, said series of fastening elements can be engaged to secure said sheet to tightly compress the rolled main body to form a smooth, substantially cylindrical package which is free from bulging projections, and has a length shorter than the occupied width of the mattress portion.

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