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(54) **Improvements in and relating to sleeping bags**

Verbesserungen in oder in Beziehung auf Schlafsäcke

Améliorations dans ou relatives à des sacs de couchage

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Description

[0001] This invention concerns improvements in and relating to sleeping bags, especially sleeping bags for use in extreme weather conditions, where body heat retention is vital.

[0002] Sleeping bags generally comprise two layers of fabric with insulating material sandwiched in between. Sleeping bags for use in extreme weather conditions are usually shaped to fit more closely to a user's body, e.g. are narrower at the feet end and wider at the shoulders end. In addition, long lengths of zip fasteners are avoided compared to conventional sleeping bags, as these are areas through which heat can be lost.

[0003] US Patent No. 3,831,206 discloses a sleeping bag with a top part and a bottom part, wherein the top part slightly overlaps the bottom part of the sleeping bag, and the top part has a thicker layer of insulation than the bottom part of the sleeping bag.

[0004] For sleeping bags usable in extreme weather conditions, there are two main requirements. The first is that areas through which heat loss can occur need to be at a minimum and the second requirement is that the weight of the sleeping bag should be kept as low as possible without adversely affecting the heat loss requirement.

[0005] A first object of the invention is to provide a sleeping bag capable of meeting the above-mentioned first requirement.

[0006] A second object of the invention is to provide a sleeping bag capable of meeting the above-mentioned second requirement.

[0007] According to this invention there is provided a sleeping bag having an inner layer and an outer layer with one or more layers of insulation material therebetween, forming top and bottom parts, the thickness of insulation material in the top part being greater than the thickness of insulation material in the bottom part, and the top part extending around a greater portion of the perimeter of the cross section of the bag than the bottom part whereby edges of the top part extend partially under a user's body, in use, the sleeping bag being characterized by additional insulating material being provided in at least one of the areas intended to surround a user's feet, chest or head.

[0008] By having the top part extending effectively partially underneath the user of the bag, there is created a wrap-around effect that helps to keep the user's body warm. By having a thinner layer of insulating material in the bottom part than in the top part, the weight of the bag may be kept down.

[0009] The preferred sleeping bag of the invention is shaped to fit a user's body, typically by being narrower at the feet and wider at the shoulders.

[0010] It is further preferable that two layers of insulation material be provided in the top part of the sleeping bag with three layers in the feet, chest and head areas of the bag.

[0011] This invention will now be further described, by way of example only, with reference to the accompanying drawings, in which: -

Figure 1 shows a sleeping bag of the invention; and Figure 2 is a section on line AA of Figure 1.

[0012] Referring to the accompanying drawings, a sleeping bag 10 is shown designed for extreme conditions i.e. for experienced campers, mountaineers and expedition members. The sleeping bag 10 is shaped to fit closely to the body shape i.e. is narrower at the feet and wider at the shoulders. The bag 10 generally has an inner layer 12 and an outer layer 14, between which are one or more layers of insulating material 16.

[0013] The sleeping bag 10 has a top part 18 and a bottom part 20. The top part 18 is sized and arranged to cover a greater area than the bottom part. In other words the top part 18 extends around the bag so that its edges will extend partially under a user's body. This creates a wrap-around effect on the top layer to reduce potential heat loss, hence keeping the user's body warmer.

[0014] The thickness of insulating material in the bottom part is less than that provided in the top part. That is done in order to keep the weight of the bag down.

[0015] In areas of the bag surrounding a user's feet, chest and head (22, 23 and 24 respectively), extra thickness of insulation material is provided. These areas are where most heat loss occurs, so that chances of keeping warm in very severe weather conditions are improved.

Claims

1. A sleeping bag having an inner layer and an outer layer with one or more layers of insulation material therebetween, forming top and bottom parts, the thickness of insulation material in the top part being greater than the thickness of insulation material in the bottom part and the top part extending around a greater portion of the perimeter of the cross section of the bag than the bottom part whereby edges of the top part extend partially under a user's body, in use, the sleeping bag being characterized by additional insulating material being provided in at least one of the areas intended to surround a user's feet, chest or head.
2. A sleeping bag as claimed in claim 1, shaped to a user's body by being narrower at the feet end and wider in the shoulder region.
3. A sleeping bag as claimed in any one of claims 1 or 2, wherein the top layer has two layers of insulation material and three layers of insulation material are provided in the feet, head and chest areas.

Patentansprüche

vues dans les régions des pieds, de la tête et de la poitrine.

1. Schlafsack, der eine innere Schicht und eine äußere Schicht mit einer oder mehreren Schichten aus Isolationsmaterial dazwischen, Ober- und Unterteile bildend, aufweist, wobei die Dicke des Isolationsmaterials im Oberteil größer ist als die Dicke des Isolationsmaterials im Unterteil und sich das Ober-
teil um einen größeren Bereich des Umfangs des Querschnitts des Sacks erstreckt als das Unterteil, wodurch sich die Seiten des Oberteils bei der Verwendung teilweise unter den Körper eines Benutzers erstrecken, wobei der Schlafsack gekennzeichnet ist durch zusätzliches Isolationsmaterial, das in wenigstens einem der Bereiche bereitgestellt wird, die dazu bestimmt sind, Füße, Brust oder Kopf eines Benutzers zu umgeben. 5
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2. Schlafsack gemäß Anspruch 1, der an den Körper eines Benutzers angepaßt ist, dadurch dass er am Fußende enger und im Schulterbereich weiter ist. 20
3. Schlafsack gemäß Anspruch 1 oder 2, bei dem die obere Schicht zwei Isolationsmaterialschichten aufweist und bei dem drei Isolationsmaterialschichten in Fuß-, Kopf- und Brustbereich bereitgestellt werden. 25

Revendications

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1. Sac de couchage (10) ayant une enveloppe intérieure (12) et une enveloppe extérieure (14), avec une ou plusieurs couches de matériau isolant (16) entre celles-ci, formant des parties supérieure (18) et inférieure (20), l'épaisseur du matériau isolant (16) dans la partie supérieure (18) étant supérieure à l'épaisseur du matériau isolant (16) dans la partie inférieure (20) et la partie supérieure (18) s'étendant sur une plus grande partie du périmètre de la section du sac que la partie inférieure (20), grâce à quoi les bords de la partie supérieure s'étendent partiellement sous le corps de l'utilisateur, au cours de l'utilisation, le sac de couchage étant caractérisé en ce qu'il comporte un matériau isolant supplémentaire dans au moins une des régions destinées à entourer les pieds (22), la poitrine (23) ou la tête (24) de l'utilisateur. 35
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2. Sac de couchage selon la revendication 1, conforme au corps d'un utilisateur en étant plus étroit à l'extrémité destinée aux pieds et plus large dans la région des épaules. 50
3. Sac de couchage selon une quelconque des revendications 1 ou 2, dans lequel l'enveloppe supérieure possède deux couches de matériau isolant et dans lequel trois couches de matériau isolant sont pré- 55

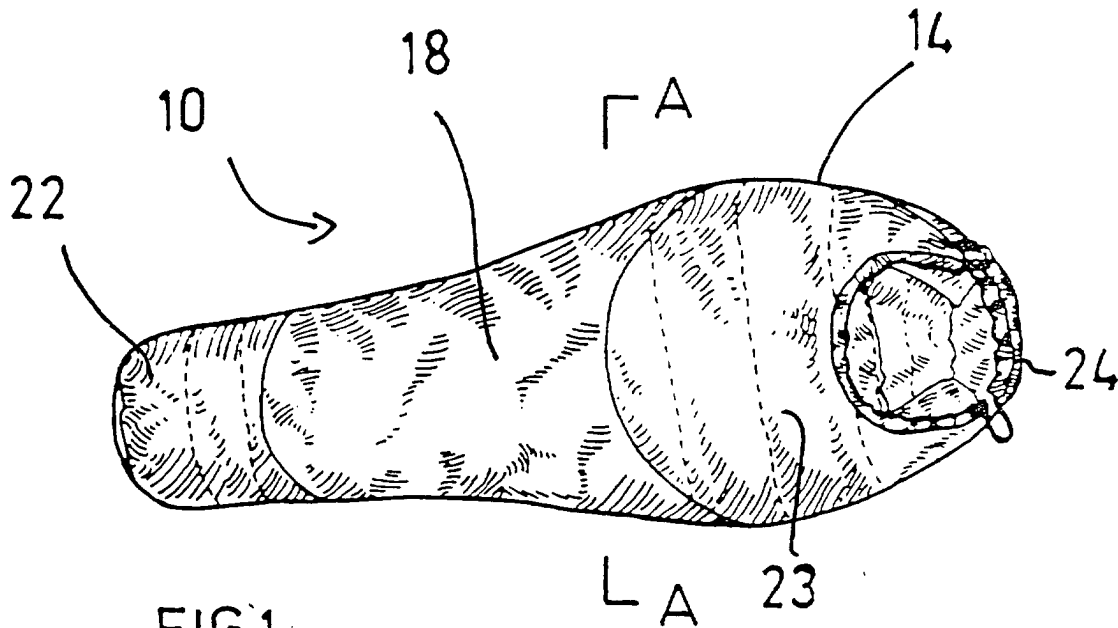


FIG. 1

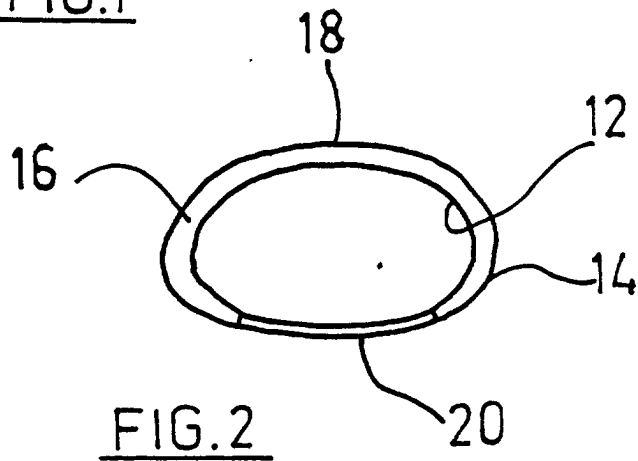


FIG. 2