Nov. 15, 1966 F. B. LUTZ 3,284,818

TUFTED FABRIC SLEEPING BAG

Filed Feb. 24, 1964

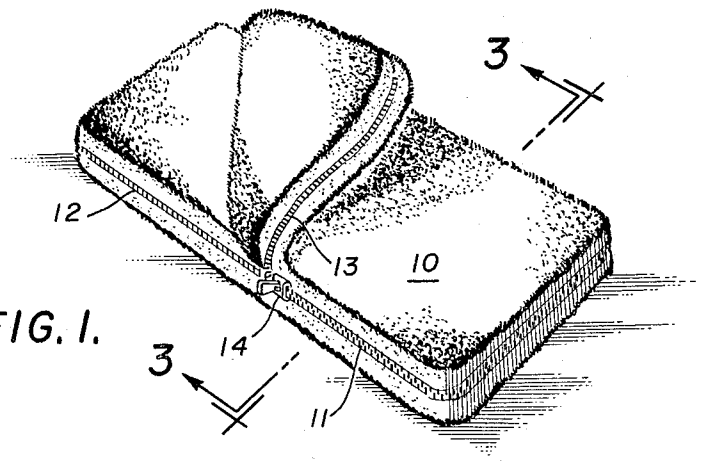


FIG. 1.

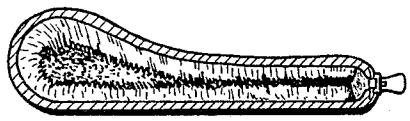


FIG. 2.

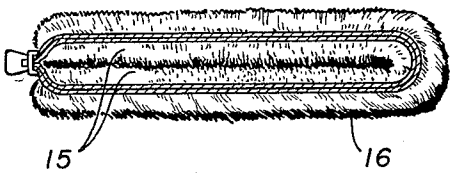


FIG. 3.

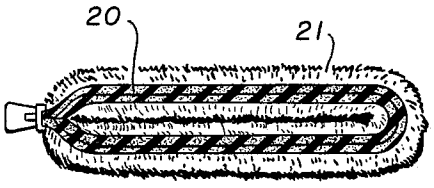


FIG. 4.

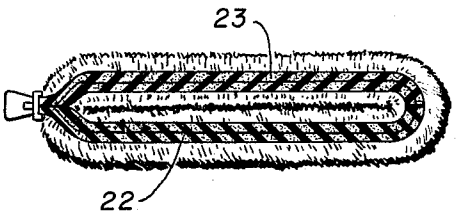


FIG. 5.

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TUFTED FABRIC SLEEPING BAG

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3 Claims. (Cl. 5—343)

This invention relates to sleeping bags and more particularly to a light weight sleeping bag constructed from a single ply tufted fabric such as tufted type blanket and deep-pile lining materials.

Sleeping bags are commonly made of a quilted material comprising a filling which may be feathers, or down; natural fibers such as kopak and wool; or synthetic fibers such as acrylics, polyesters, and acetates. The materials are used as fillers to provide warmth to the user of the sleeping bag. While it is essential to construct a sleeping bag that will keep the user thereof warm, it is frequently desirable that the weight be kept at a minimum. Extra weight and bulk is obviously objectionable in some instances. This is especially true if the users are hikers, mountain climbers, or children.

The discovery has been made that a tufted type blanket material can be used for making a much lighter sleeping bag while maintaining adequate warming propensities thereof. Heretofore, other lightweight fabrics such as household blanket material of the conventional woven and napped type have been used in an attempt to provide a lighter weight sleeping bag. One disadvantage of the woven and napped type blanket materials is that neither is strong enough or resistant enough against abrasive actions to make a satisfactory sleeping bag without sacrificing the desirable property of light weight. Therefore, in the past a sheet type material has been used to provide an outer covering for a sleeping bag material.

The outer ply of material adds to the weight of the sleeping bag and increases the production costs thereof. With this in mind it is an object of this invention to use a tufted type blanket or deep-pile lining material to form a strong, light weight, easily washable sleeping bag which does not require an outer ply covering made of a different fabric.

Another object of the present invention is to provide a warm, light weight sleeping bag having improved aesthetic qualities.

Other objects and advantages of the present invention will become apparent when the following detailed description is read in conjunction with the appended drawing wherein

FIGURE 1 is a perspective view of the invention as viewed from the top thereof;

FIGURE 2 is a transverse cross-sectional view of one form of the invention;

FIGURE 3 is a transverse cross-sectional view of FIGURE 1;

FIGURE 4 is a transverse cross-sectional view of another form of the invention wherein a ply of non-cellular synthetic foam is bonded to the back of the tufted fabric; and

FIGURE 5 is a transverse cross-sectional view showing a cellular and non-cellular synthetic foam.

One embodiment of the invention contemplates a lightweight, washable sleeping bag that is economically constructed from a rectangular piece of tufted type blanket material by folding the piece of material in half with the tuft sides facing together to form a double layer having a zipper attached along the outer edges of the longer sides and across one end thereof for connecting the sides and the said end together to form a sleeping bag that is warm and aesthetically pleasing to the eye. Another

form of the invention has been realized by placing two pieces of fabric back-to-back or folding a single piece to form a similar double layer. According to a further modification of the present invention, a layer of synthetic foam is bonded to the side of the fabric opposite the tuft for providing additional warmth and comfort to the user.

In accordance with the present invention a sleeping bag **10** is formed from a rectangular shaped piece of tufted fabric. This is accomplished by providing a zipper fastener along the edge of both sides and one end of the fabric for connecting the said sides and end together when the article is folded on itself thereby forming an oblong bag-like structure. The zipper fastener **11** is comprised of a pair of zipper elements **12** and **13** which have complementary lugs thereon for connecting the sides and end together when the fabric is folded. These two rows of zipper lugs are interlocked and disconnected by means of the usual double-pull slide member **14** cooperatively attached thereto in the well known manner.

In practice, as shown in FIGURE 3, the fabric may be folded in a back-to-back relationship to form a double ply before connecting the edges and one end thereof together in the manner described hereinbefore to form a bag-like structure. By referring to FIGURE 3 it will become apparent that the inner ply **15** and outer ply **16** may be reversed without changing the appearance of the sleeping bag. This is achieved by making a different fold in the double ply fabric prior to interlocking the zipper lugs. The double-pull slide member **14** may be operated from either side.

According to FIGURE 4, a modification of the invention is shown in which the invention is produced from two pieces of rectangular shaped materials of the same size disposed one upon the other and bonded together with a suitable adhesive to provide a two-ply structure. This two-ply structure is then formed into a sleeping bag in the same manner as described for FIGURE 3. Referring to FIGURE 4, the inner ply or layer **20** is a cellular synthetic foam comprised of polyurethane or the like. Layer **20** is bonded to the back of a tufted fabric **21** which may be either a blanket type material or a deep-pile material. The layer of foam shown is made from cellular forming polyurethane which is characterized by a porous type structure capable of conducting water vapor through the pores thereof. This feature is important to the user of the present invention because moisture such as perspiration given off by the user may be transmitted from the enclosed occupied area while the warmth is maintained therein. Moreover, the polyurethane foam is extremely light and can be washed without losing any of its cushioning effects which provide additional comfort to the user thereof.

FIGURE 5 illustrates a modification of FIGURE 4 wherein the synthetic foam layer **20** is comprised of both cellular and non-cellular forming materials. Occasionally the user must place his sleeping bag on an area which is wet. As shown in FIGURE 5, a layer **22** of non-cellular polyurethane foam is provided for the ground side of the bag to prevent seepage of moisture or water vapor through the foam layer. The layer **23** is comprised of cellular polyurethane for the reasons stated earlier.

From the above description it will be apparent to those skilled in the art that while the fastening elements shown are desirable, such elements are not essential to the present invention and, accordingly, may be changed to suit particular demands.

What I claim:

1. A reversible type sleeping bag comprising a single piece of tufted fabric having a layer of synthetic foam superimposed on the back thereof, said foam being com-

prised of a cellular portion and a non-cellular portion, said fabric being folded to dispose the foam between layers of tufted fabric, a row of fastener lugs secured to the marginal portions of three edges of the folded fabric, said fastener lugs extending along both longitudinal edges and one end, and a double-pull slide member positioned intermediate the ends of said row of lugs for interlocking and disengaging said lugs when said folded fabric is shaped into a bag-like structure.

2. The sleeping bag of claim 1 in which the tufted fabric is deep-pile type material.

3. The sleeping bag of claim 1 in which the tufted fabric is a blanket-type material.

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