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E. I. WEISS

3,116,489

GARMENTS

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FIG. 1

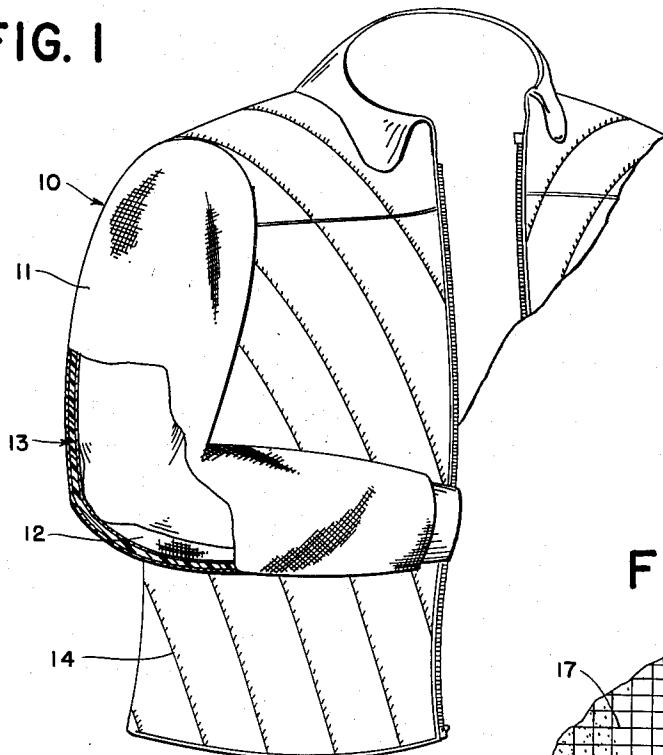


FIG. 3

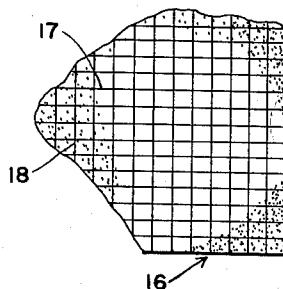
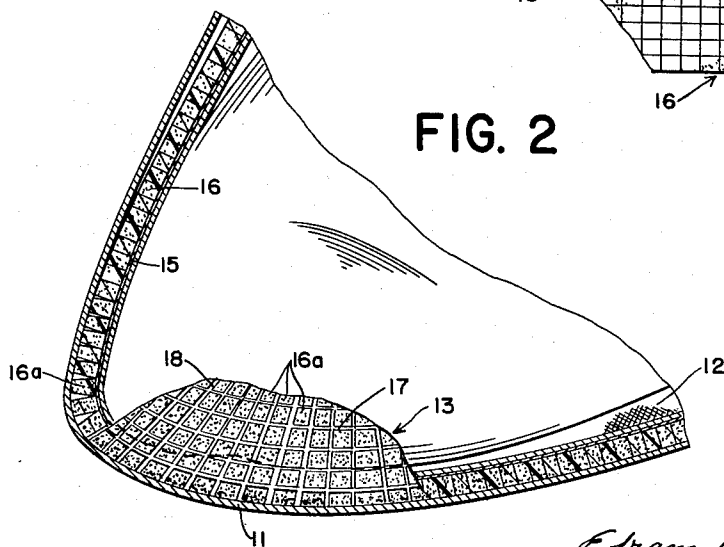


FIG. 2



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4 Claims. (Cl. 2—97)

This invention relates to garments and more particularly to garments of the thermal type, i.e., those which incorporate an insulating lining or the like as a protection against cold.

The use of an insulating lining of various types has been known for many years. The insulation qualities generally depend upon the thickness of the lining although there are other characteristics that are of importance. However, the use of a fairly thick lining is almost invariable when good insulation is required.

For many years the use of insulation lining such as above described has been found objectionable because the garment assumes an unattractive bulkiness. This result is also objectionable from a functional viewpoint. In other words, an unduly bulky garment is both unsightly and unwieldy.

An example of lining which is conventionally used is so-called foam plastic with a fabric backing. The foam plastic is generally cellular polyurethane or the like while the fabric is generally a two-way stretch knitted or woven material.

With the foregoing in mind I have devised a lining of the above type which is incorporated in a conventional manner in a garment or the like, but which largely eliminates bulkiness and conforms, as required, to the contours of the human body. This result is realized by cross-slitting the lining, along both its length and width, while maintaining the backing substantially intact, so as to provide, in effect, independent foam plastic or foam rubber, square-like sections which permit the lining to cup and drape itself around the contours of the body.

The invention will be further understood from the following descriptions and drawings in which:

FIGURE 1 is a fragmentary view of an insulated jacket partly broken away at the elbow;

FIGURE 2 is an enlarged cross-sectional view of the elbow portion of the garment; and

FIGURE 3 is a plan view illustrating a fragmentary or edge piece of the foam plastic lining material, before the material is incorporated into a garment.

The jacket 10 has the usual outer lining 11 which may be of nylon or the like. It is also provided with an inner lining 12 which may be of nylon or cotton or the like. Disposed between the inner and outer linings is the interlining 13 which is of insulating material as above described.

Interlining 13 is disposed throughout the entire body of the jacket. Along the main body, it may be stitched to the other linings as by rows of stitching 14. Sometimes the arms or sleeves are also stitched in the same manner but they are very often left unstitched as illustrated herein.

Interlining 13 consists of a fabric backing 15 which may be of two-way stretch material, or stretchable in all directions. Adhered thereto is the foam plastic material 16. Purely as an example, an insulating interlining comprising such foam plastic may have a normal

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thickness of about $\frac{5}{32}$ of an inch, while the backing may be of stretchable cotton or so-called Helanca or nylon stretch material.

Referring to FIGURE 3, I show the foam plastic 16 as having a series of parallel slits 17 in one direction and a second series of parallel slits 18 in a perpendicular direction thus forming a grid of the entire area of the insulating material which extend to all edges of the material. The slits are brought right down to the base fabrics as illustrated in FIGURE 2.

Referring to FIGURE 2, it will be noted that as the foam plastic material is bent around the elbow, the slit foam plastic, and therefore mutually independent pieces thereof, separate as illustrated by the particular square-like sections 16a. The same thing occurs, of course, in the perpendicular direction so that, as will be evident from FIGURE 2, the material becomes cupped or concavo-convex, thus permitting it to drape itself neatly around an elbow, or a shoulder, or the like.

It is important that the slits be disposed in at least two directions as illustrated. Such arrangement permits the cupping effect which is necessary and which permits snug draping of the garment around bends for both aesthetic and functional advantages.

Although the slitting is shown in two directions which are 90° displaced relative to each other, the slitting may be modified as long as the material is thereby enabled to become cupped. This is particularly important as regards the sleeves since these ordinarily tend to balloon and further to restrict free movement.

I have shown what is now considered a preferred embodiment of the invention, but it is obvious that changes and omissions may be made without departing from its spirit. For example, the term "garment" may include any article worn by a person and the lining, although of an insulating nature, may serve other functions such as padding.

What is claimed is:

1. A garment having an outer lining, and an inner heat insulating lining, said heat insulating lining comprising a backing, and flexible cellular foam material adhered to said backing, said foam material being slitted in at least two directions so as to form mutually independent segments of said foam material capable of expanding and assuming a joint cupped shape, said slitting going down to said backing.

2. A garment according to claim 1 and wherein said two directions are at 90° in respect to each other.

3. A garment according to claim 2 and wherein said backing is of stretch material, said slitting comprising a series of parallel slits in one direction, and another crossed series in a 90° direction thereto.

4. A garment according to claim 3 and having sleeves, and wherein said heat insulating lining is disposed within said sleeves.

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