June 30, 1953 E. ENGEL 2,643,385

GARMENT

Filed April 8, 1953

Fig. 1.

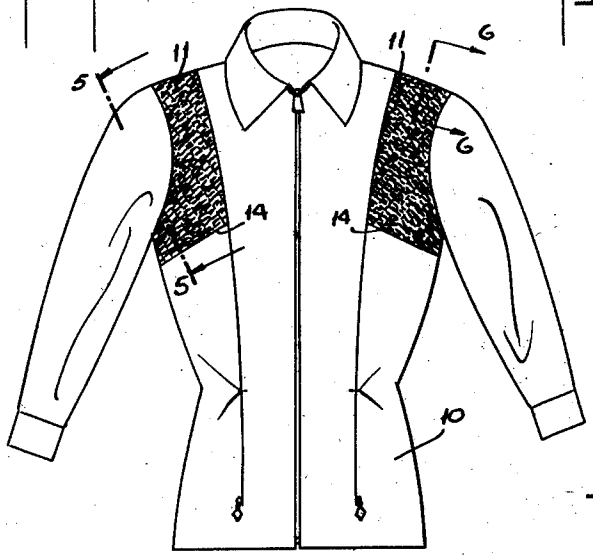


Fig. 5.

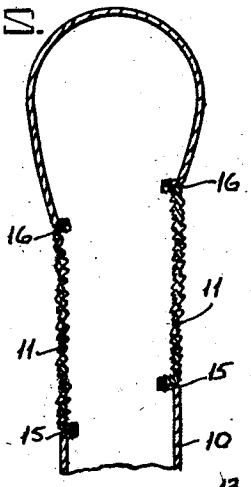


Fig. 6.

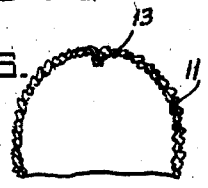
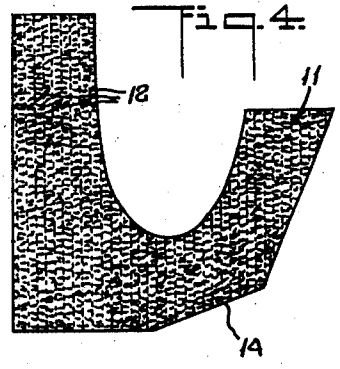


Fig. 4.



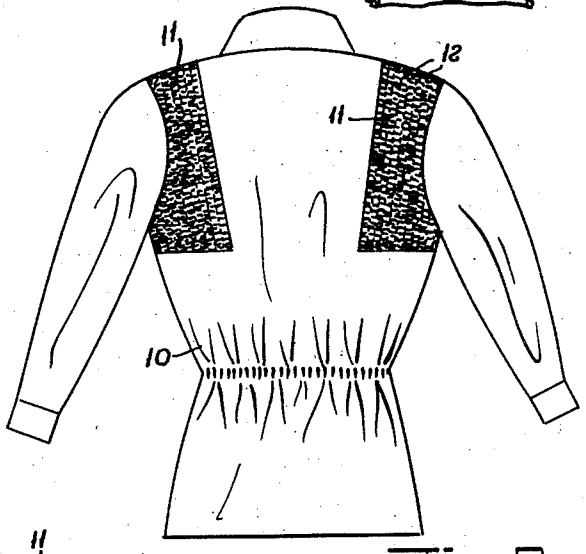


Fig. 3.

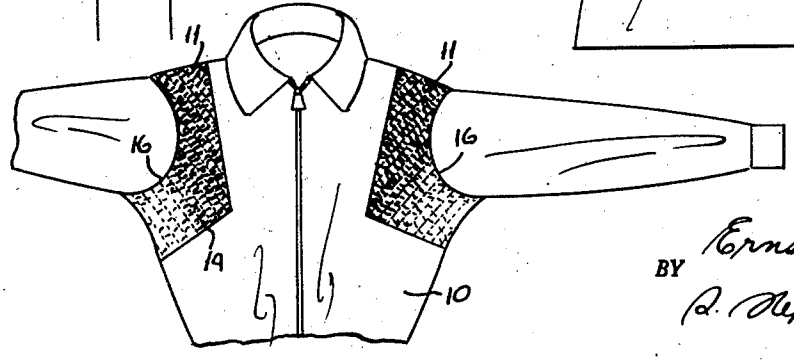


Fig. 2.

INVENTOR.
Ernst Engel
BY
R. Stephen Baker
ATTORNEY

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GARMENT

Ernst Engel, New York, N. Y.

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1 Claim. (Cl. 2—108)

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This invention relates to garments and more particularly to a construction thereof which provides freedom of movement by the arms so that the garment is well adapted for use in sports activities.

The invention is particularly concerned with the underarm construction of a garment employed for outdoor activities such as skiing although it is adapted for many other sports or activities. I am aware that many garments have been devised to provide for freedom of arm movement. In general, this is accomplished by applying a resilient insert under the arms so that the insert, being extensible or stretchable permits swinging motions of the arm. Other garments have employed pleated or similar inserts but such expedients are bulky and often unsightly and this invention is accordingly directed to a resilient type of insert.

I have found that a pronounced defect in prior resilient underarm inserts or the like was that the result of stretching such inserts by swinging the arms, necessarily rendered the underarm section more porous and accordingly less impervious to moisture, snow, cold winds or the like. Thus, the inserts in substantially all cases comprised knitted or similarly porous pieces, the openings of which became enlarged as the insert was extended or stretched. It was thus impossible to devise a waterproof or water-resistant garment provided with resilient underarm inserts. This interfered with the development of ski wear or similar types of outdoor garments having such features.

Bearing the foregoing in mind, I have devised a garment particularly adapted for outdoor use and which embodies a high degree of resiliency or elasticity under the arms so that the arms of the wearer may be swung about freely. The garment is thus well adapted for skiing which involves a considerable number of arm movements. The inserts are of such a character that they are just as resistant to water or inclement weather whether stretched or unstretched. This is accomplished by fabricating the inserts of tightly woven material shirred with elasticized threads. Stretching the arms merely reduces the shirring but it does not affect the water resistance of the material. Accordingly, the garment is thus adapted for outdoor purposes and particularly such weather as is encountered under snow conditions. The garment of the instant invention further provides for stretchability where it is most needed and restricts it where it is quite unnecessary. In addition, economies are realized in producing the garment as will be shown hereinafter.

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

Figure 1 is a front elevational view of a garment constructed according to the instant invention;

Figure 2 is a rear elevational view thereof;

Figure 3 is a fragmentary front elevational view, with the arms outstretched and indicating the action of the inserts;

Figure 4 is a plan view of one of the resilient inserts;

Figure 5 is an enlarged cross-sectional view as taken along the line 5—5 of Figure 1; and

Figure 6 is an enlarged cross-sectional view as taken along the line 6—6 of Figure 1.

The garment 10, in the form illustrated, is a sports garment particularly adapted for outdoor activities. Being essentially a cold weather garment, the material thereof comprises a closely woven fabric of poplin, nylon or the like. Such materials are, or are easily made, water resistant or water repellant, the very nature of the close weave assisting in this objective.

Many sports or activities require lifting or stretching of the arms, an obvious example being skiing. However, it is essential that the garment maintain its water resistance, so that the heretofore known expedient of employing fabric of woven elastic threads or knitted material is undesirable for reasons set forth above. According to the present invention a pair of substantially J-shaped inserts 11 are applied over the shoulders and around the underarm portions of the garment so that the principal fabric formation of the garment is discontinued at such areas, the inserts taking its place.

The principal feature of the inserts 11 is their shirred elastic nature. Such shirring is accomplished by sewing the inserts longitudinally with vertical elastic threads 12 which, when contracted, produce horizontal shirring lines. When the inserts are pulled vertically, against the action of such contracted threads 12, the threads stretch and tend to restore the insert to a planar or unshirred condition. It will be noted that the material of which the inserts is made, is likewise a tightly woven fabric which, in most cases will be of the very same material as that of the body 10. Accordingly, the inserts 11 are no less water resistant when they are stretched than when they are unstretched. This is in distinction to prior inserts which effectively lost their water resistance characteristics when stretched.

It is preferable to dispose the inserts so that the lines 12 are substantially vertical as illus-

trated in Figure 2. In this way, the raising of the arms as illustrated in Figure 3 is facilitated.

It will further be observed that each insert 11 completely encircles the shoulder portion, the extreme outer ends of the insert being joined at line of stitching 13 as illustrated in Figure 6. This provides complete resiliency around the shoulder and facilitates the sewing operation since the sleeves of the garment in no manner are connected to the body of the garment except through such inserts. No claim is made to the shirred elastic material per se except in the specific combination disclosed herein and the specific nature of the inserts which are formed from such shirred material.

It will be noted that each J-shaped insert 11 is provided with a lower diagonal edge 14 on the short arm of the J and which, when brought across to the front of the garment as illustrated in Figure 1, produces a form fitting front line at the breast portions. Such lines 14 appear along the front portion of the lines of stitching 15, which connect the bottom edge of the inserts to the body. The stitching of the inserts is completed by the line of stitching 16 which connects the respective shoulder portions of the body and sleeves together.

What is claimed is:

A garment having a body of tightly woven substantially water resistant fabric and an elastic insert at each side of said garment at the underarm portions thereof and continuing completely around and over the shoulders of the garment, said insert being of tightly woven fabric material and having normally contracted elastic threads therein, said insert and fabric material being shirred by said elastic threads in their normally contracted state so that said insert is stretchable from its normal shirred condition to a substantially unshirred condition, each insert being substantially J-shaped with the short arm of the J at the front of the body, the bottom edge of said short arm being diagonal and being disposed and extending upwardly from the sides of the body towards the center thereof.

ERNST ENGEL.

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