BASTE FABRIC LAYERS WITH THERMOPLASTIC THREAD

COVER EXPOSED THREADS WITH ABSORBENT

APPLY HEAT TO MELT BASTING

REMOVE ABSORBENT AND BASTING

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This invention relates to the basting of fabrics prior to permanent sewing. In the sewing and garment-making industry, the individual parts of the garment must be held together in proper alignment during stitching of permanent seams. This is usually accomplished by temporarily sewing the components together with a basting thread, which serves to hold the pieces in place and to facilitate handling during permanent seaming. Thus, for example, in the fabrication of a suit or coat, the outer fabric, the stiffening, and the facing are aligned in proper fashion and stitched together by sewing a number of seams back and forth across the fabric, the seams having a stitch length of about 1/4 inch. Upon completion of the permanent sewing, the basting threads are then removed manually by breaking each thread and pulling it out of the fabric in pieces. This manual removal of basting threads is a time-consuming operation and as such adds appreciably to the production cost of the garment. Industry has long sought a more economical method but has not been successful in such attempts. Thus the manual method is still used, despite its undesirable cost.

An object of this invention is to provide a more efficient basting process. A further object is to provide a faster and more economical method for temporarily basting garment components and subsequently removing the basting thread.

These and other objects will become apparent in the course of the following specification and claims.

The invention will be more readily understood by reference to the drawing. The figure is a flow sheet showing the various steps of the present processes.

The objects of this invention are accomplished by bast ing the fabric layers together by means of a thread composed of a low-melting thermoplastic material. After the component fabric layers are basted together, the permanent seams may be sewn in the composite by the usual procedure. The basting threads are subsequently removed by pressing or ironing the composite between sheets of an absorbent material such as paper at a temperature sufficient to melt the basting thread but insufficient to damage the other fibers in the fabric.

Any low-melting thermoplastic material may be used for the basting threads according to this invention. It is only necessary that the basting thread be composed of a material which melts at normal ironing temperatures and which has a melting point lower than that of the other fibers in the fabric layers. Suitable thermoplastic materials include the polymers and copolymers of ethylene, propylene, vinyl chloride, vinylidene chloride, vinyl acetate, acrylonitrile, etc. Polyethylene and polypropylene with melting points of 230°C to 280°F, and 325°F to 335°F, respectively, are particularly suitable. Other fibers which are suitable include those from vinyl chloride copolymers, such as the "Vinyon" fibers. Monofilaments or multifilament threads may be used. In some cases, the latter may be more desirable from the standpoint of sewing ease owing to their softer, more flexible nature.

During the pressing operation, the basted fabric composite is placed between thin sheets of an absorbent mate rial, such as paper toweling, tissue paper, etc. The pressing temperature is selected according to the melting point of the basting thread and the nature of the fabric composite. The paper, being nearer the heat source during the pressing operation, is at a slightly higher temperature than the fabric composite. This factor, coupled with the absorbency of the paper, causes the basting thread, as it melts, to adhere to the paper and thereby be removed from the garment. In general, only a few seconds exposure to the melting temperature will be sufficient to cause the basting thread to melt and adhere to the paper. From the standpoint of additional economy, the removal of the basting thread may be performed in conjunction with the final pressing of the garment. Thus an additional processing step is eliminated.

The following examples illustrate this invention. They are not intended to limit it in any manner.

**Example I**

Two samples of a polyethylene terephthalate/cotton (65/35) wash-wear suiting fabric are basted together by sewing seams having seven to nine stitches per inch through the two layers of fabric. The basting thread used is a 67 denier polyethylene monofilament. The basted composite is then placed between paper towels and ironed on both sides using an ordinary household iron at a cotton setting. The polyethylene basting thread melts and sticks to the paper towels. When the paper towels are removed, no remnants of the polyethylene basting thread are found in the fabric.

**Example II**

The above experiment is repeated using an 18 denier polypropylene monofilament as the basting thread. Again the pressing operation causes the molten polypropylene thread to adhere to the paper towel and be thus removed from the fabric.

Many obvious equivalents will be apparent to those skilled in the art from a reading of the above without a departure from the inventive concept.

What is claimed is:

1. In a process for attaching adjacent layers of fabric by thread the improvement which comprises basting with a thread of a low melting thermoplastic material prior to stitching with thread and after thread attachment, covering the said basting with sheets of absorbent material for the said thermoplastic material in the basted state, applying heat to melt the said thermoplastic material and thereafter removing the said sheets of absorbent material with the said thermoplastic material adhered thereto, the said thermoplastic material melting at normal ironing temperatures but below the melting point of other fibers in the fabric layer.

2. The process of claim 1 wherein the said basting thread is formed from polyethylene.

3. The process of claim 1 wherein the said basting thread is formed from polypropylene.

4. The process of claim 1 wherein the said fabric layers contain polyethylene terephthalate.

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