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ADJUSTABLE FABRIC ARTICLE

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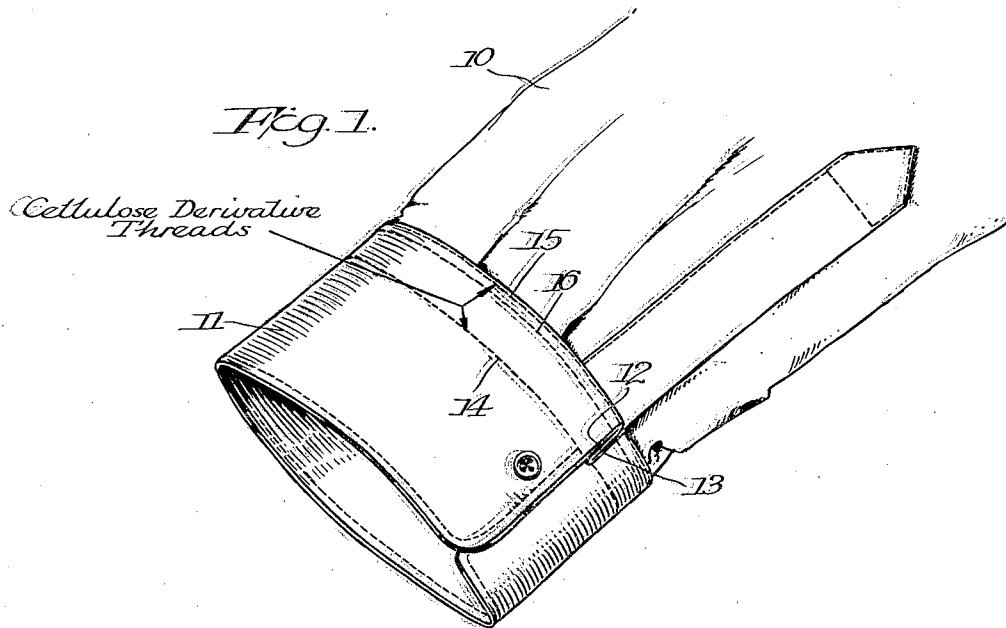
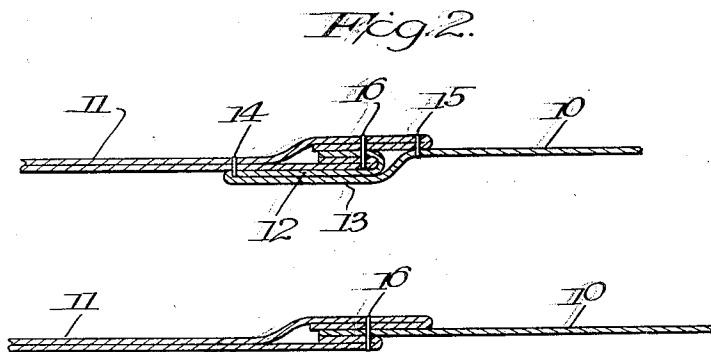


Fig. 3

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ADJUSTABLE FABRIC ARTICLE

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3 Claims. (Cl. 2—269)

This invention relates to fabric articles and to means and methods of lengthening or enlarging the same. The invention has particular utility in the garment field, for rendering the size of a garment adjustable.

It is an object of the present invention to provide an article that may be lengthened or enlarged in size with greater facility than such operations have been accomplished in the past. Specifically, it is an object of the invention to provide a tuck or folded portion which may be untucked, straightened-out or unfolded, without the necessity of physically removing the retaining threads stitched therein, or without removing fastening means such as snap fasteners, buttons, hooks or the like. Instead of physically removing such a retaining thread, by unstitching the same, the present invention contemplates dissolving or softening the retaining threads to destroy their tensile strength, so that the tuck may be pulled out, without removing the threads. As a result, the time, trouble and expense involved in picking out the retaining threads are avoided.

From another viewpoint, the present invention provides a novel method of lengthening or enlarging a fabric article. This method comprises the steps of dissolving, softening or plasticizing certain threads used to secure fabric plies in fold relation, and then unfolding the plies.

In the accompanying drawing, the invention is illustrated in connection with a shirt sleeve, but it must be understood that the invention is not limited to such use, since the novel structure disclosed herein may be employed with other fabric articles, for instance, in connection with the legs or waist bands of mens' trousers; collars and collar bands of mens' shirts; various parts of mens' and womens' underwear; and, in fact, wherever it may be desirable to lengthen or enlarge a fabric article.

In the accompanying drawing:

Figure 1 is a perspective view of a shirt sleeve embodying the present invention.

Figure 2 is a sectional view taken through the tuck shown in Figure 1, and

Figure 3 is a view similar to Figure 2, with the tuck straightened-out.

In the drawing, a shirt sleeve 10 of cotton, linen, wool, natural silk or the like is provided with a cuff 11 of similar material, in the usual manner. Adjacent the line of junction between the cuff and the sleeve, the material of the sleeve is folded upon itself as at 12, 13, to shorten the sleeve. The tuck or folded portions 12, 13 are

secured in the tucked relation by threads 14, 15, stitched in rows in the manner shown in Figures 1 and 2. A third row of stitching 16 is a permanent part of the garment and serves to attach the cuff to the sleeve. The thread used in this line of stitching is preferably of the same material as the fabric from which the sleeve and cuff are made. It is important that it be of a different character from the threads in the rows 14 and 15.

The threads 14, 15 are made up of fibres of a cellulose derivative, preferably a cellulose ester. Such commercial products as "Celanese" or "Acele" are suitable. Of course, any equivalent cellulose derivative threads may be used, such as cellulose acetate, ethyl-cellulose, methyl-cellulose, benzyl-cellulose, nitro-cellulose, or other esters or ethers of cellulose or mixtures thereof.

When it is desired to lengthen the sleeve of the shirt, it is simply necessary to moisten the area of the tuck 12, 13, with some suitable plasticizing or softening agent for the cellulose derivative threads, such as acetone. The threads 14 and 15 will immediately become softened and will substantially entirely lose their tensile strength, whereupon the tuck may be unfolded or pulled out, as shown in Figure 3. Of course, the solvent will have no effect upon the fabric of the shirt or cuff, or upon the thread in the line of stitching 16, because those parts are made of natural material which is not affected by the solvent. After the tuck is pulled out, the junction between the cuff and the sleeve may be ironed or otherwise subjected to heat and pressure to drive off the solvent and to smooth out the fold lines. By this simple process, the shirt sleeve or other garment part may be lengthened or enlarged.

This invention has numerous advantages over the prior art of stitching a tuck in place with conventional cotton, linen or silk thread. When such threads are used, it is necessary, in order to unfold and straighten-out the tuck, to cut the threads and pick the stitches out of the fabric. If a lockstitch is used, this operation is quite laborious, and even with a chain stitch, considerable difficulty is encountered. Moreover, with the removal of the stitches, small holes are left in the goods which are unsightly, particularly in a new garment which has been lengthened by the seller to meet the particular demands of a purchaser. With the present invention, the small needle holes formed in stitching the cellulose acetate thread in place are substantially invisible, since they are filled by the plasticized thread when the tuck is unfolded. The holes remain

filled with the material of the thread because the cellulose derivative is set and hardened by the heat and pressure used to drive off the solvent. Thus, the lines of stitching will be invisible after the tuck has been pulled out.

The rows of cellulose acetate stitching are not unsightly in the garment, if the adjustable part is retained in its shortened state. The threads are preferably of the same color as the fabric of the garment, or of a color harmonizing therewith. In fact, they are preferably indistinguishable from the row of stitches 16, which is a permanent part of the shirt construction.

The invention is particularly useful for ready-made shirts sold by retail establishments, where it is not desired to keep in stock a complete line of shirts of all sleeve lengths. By the use of the present invention, the stock kept on hand to satisfy all users may be substantially cut in half. Also, the invention is useful as a means for providing a range of half sizes, something which is not done in commercial establishments at the present time. Certain persons desire a sleeve length midway between the standard lengths, but according to present commercial practice, it is impossible to purchase them ready-made. With the present invention, all of the shirts of a particular line may have formed in the sleeves a quarter-inch tuck, so that the sleeves may be lengthened one-half of an inch, by simply softening the retaining threads and pulling out the tuck. Thus, sleeve lengths of 32, 33, 34, and 35 inches, which are standard lengths, may immediately be converted into $32\frac{1}{2}$, $33\frac{1}{2}$, $34\frac{1}{2}$ and $35\frac{1}{2}$ inches, respectively, to satisfy the demands of particular customers.

The invention is not confined to use in the field of wearing apparel, but includes all fabric articles where it may be desired to increase their size. For instance, tucks with cellulose derivative retaining threads of the type described herein, may be used in curtains, draperies, furniture covers, bed clothes, pillar covers and the like, to make the articles adjustable in size, either to compensate for shrinkage, or otherwise to increase their length. When used with such articles, it is only necessary to soften the cellulose derivative threads and pull out the tucks, as described above.

Therefore, although the present invention has been described with considerable particularity, it must be understood that it is not limited to the details described above and shown in the accompanying drawing, but covers all devices and methods coming within the scope of the appended claims or their equivalents.

I claim:

1. The method of enlarging a fabric article, said article comprising fabric consisting substantially entirely of yarns of natural fibres and having a tuck therein held in the tucked relation by a cellulose derivative thread stitched along the tuck, said method comprising applying a solvent for the cellulose derivative to the article and to the stitched thread, thereby softening and substantially destroying the tensile strength of said thread, and pulling out the tuck without physically removing the thread.

2. The method of lengthening the sleeve of a shirt or the like, said sleeve comprising fabric made substantially entirely of natural fibres and having a tuck therein held in the tucked relation by a cellulose derivative thread stitched along the tuck, said method comprising the steps of applying a solvent to the stitched thread, thereby softening and destroying the tensile strength of the fibres therein without injuriously affecting the fibres of said cloth, and leaving the tuck substantially unsecured, and unfolding and straightening-out the unsecured tuck to lengthen the sleeve, without physically removing the softened thread.

3. A garment made from cloth consisting substantially entirely of fibres of a class of textile materials which are insoluble in a solvent for textile materials of another class, said garment having a portion which is extensible from a relatively short, original length to a longer, ultimate length, said portion comprising two cloth parts joined together by a securing thread consisting of fibres of the same class of textile materials as the fibres of said cloth, said portion also comprising plies of said cloth folded upon each other in tucked relation adjacent the connection between the two parts, and a retaining thread formed substantially entirely of fibres of the second-mentioned class of textile materials, said retaining thread being stitched through the plies of said tuck and serving to retain the same in tucked relation, but being capable of being softened by the application of said solvent thereto and to the adjacent portions of the cloth and the securing thread, whereby the plies of the tuck may be unfolded to lengthen said portion without physically removing said retaining thread, and without adversely affecting the fibres of the cloth or softening the securing thread so as to effect inadvertent separation of said two parts.

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