

[54] **GARMENT PATTERN MAKING DEVICE
AND METHOD**

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[51] Int. Cl. **A41k 3/015**

[58] Field of Search **33/12, 17, 11, 14**

[56] **References Cited**

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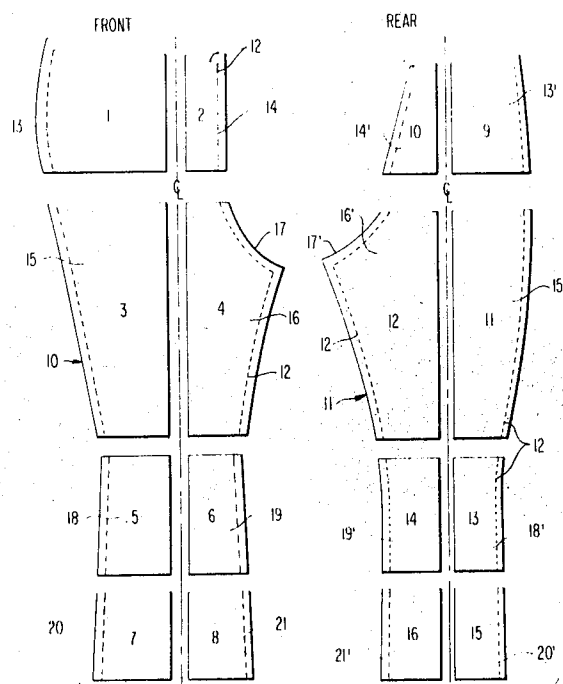
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[57]

ABSTRACT

A pattern making device or means particularly for pants embodies a multi-section template for the front and rear sections of a single leg. The template sections are characterized by being totally free from one another and therefore individually movable in any direction. Critical hip measurement and crotch depth, as well as other garment dimensions, may be customized to suit the needs of an individual. When properly adjusted and sized a tracing is produced around the margin of the template to produce pattern sections on paper.

1 Claim, 4 Drawing Figures



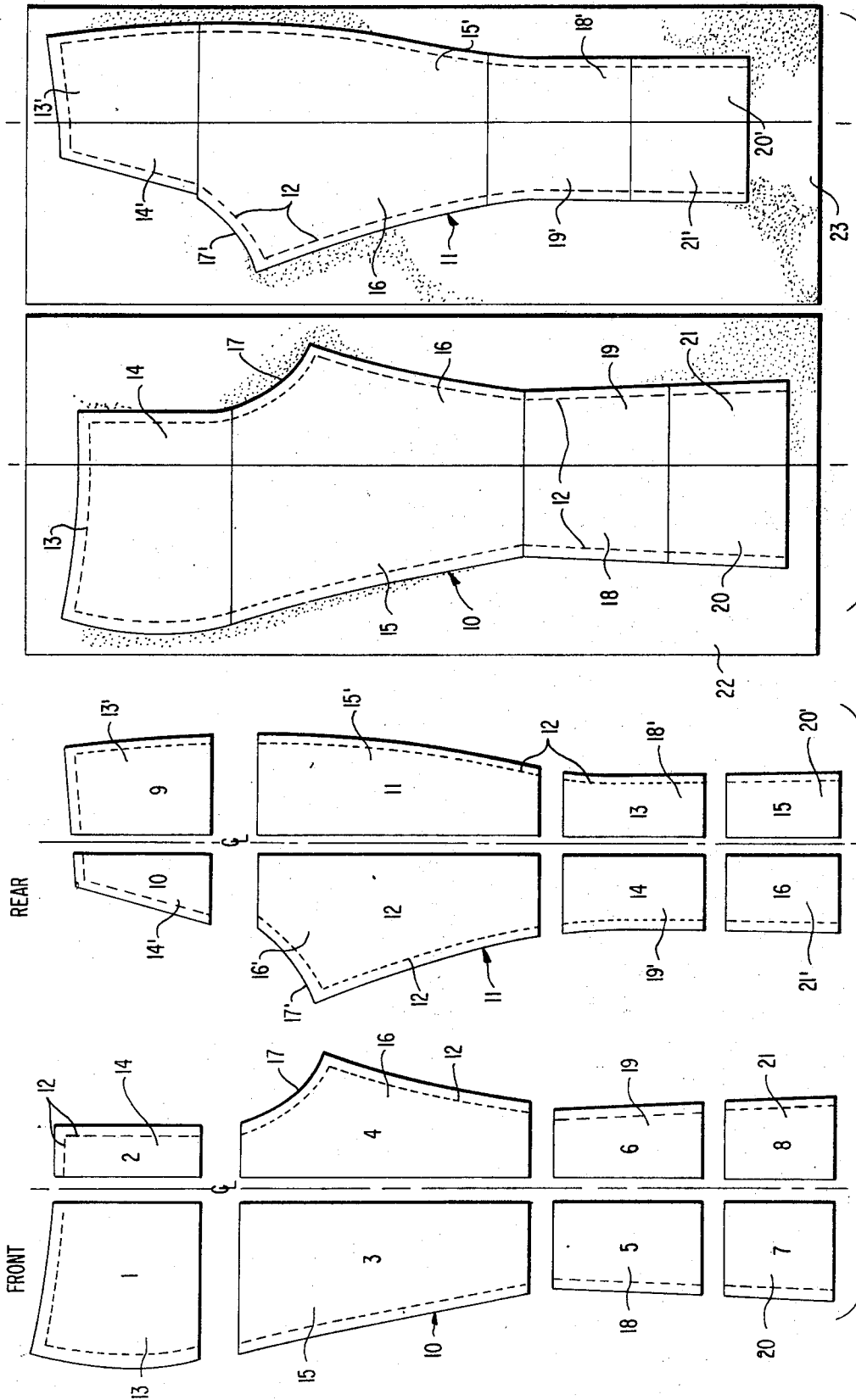


FIG. 1

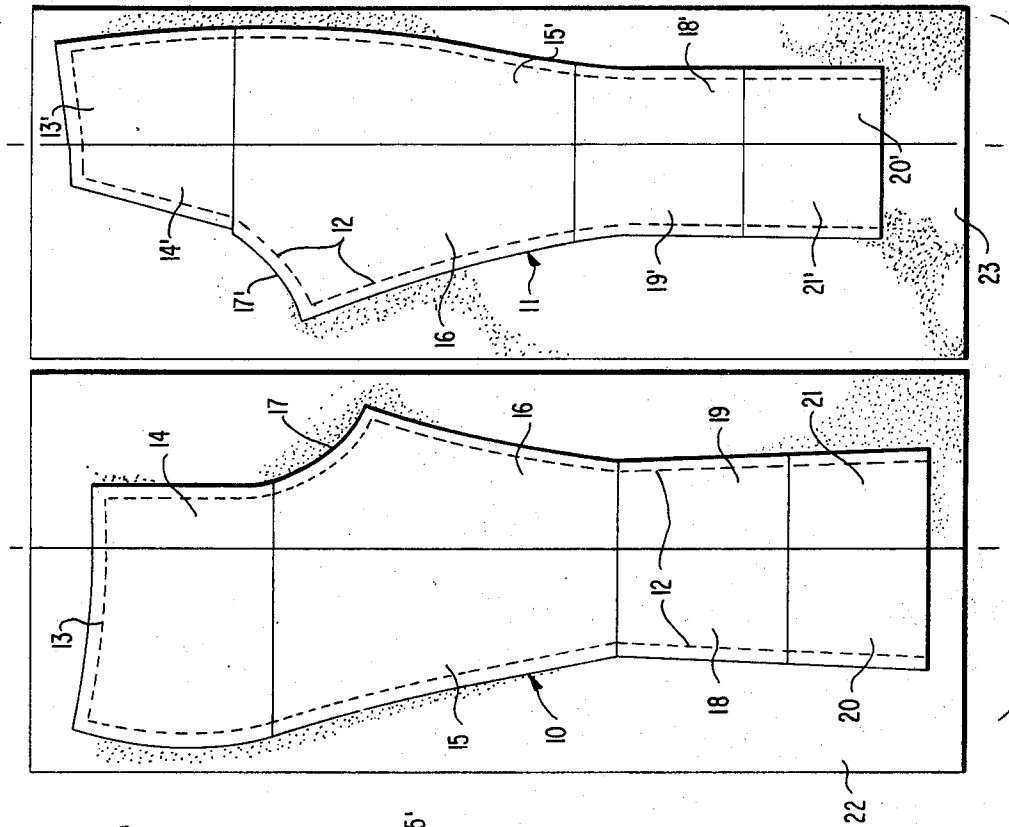


FIG. 2

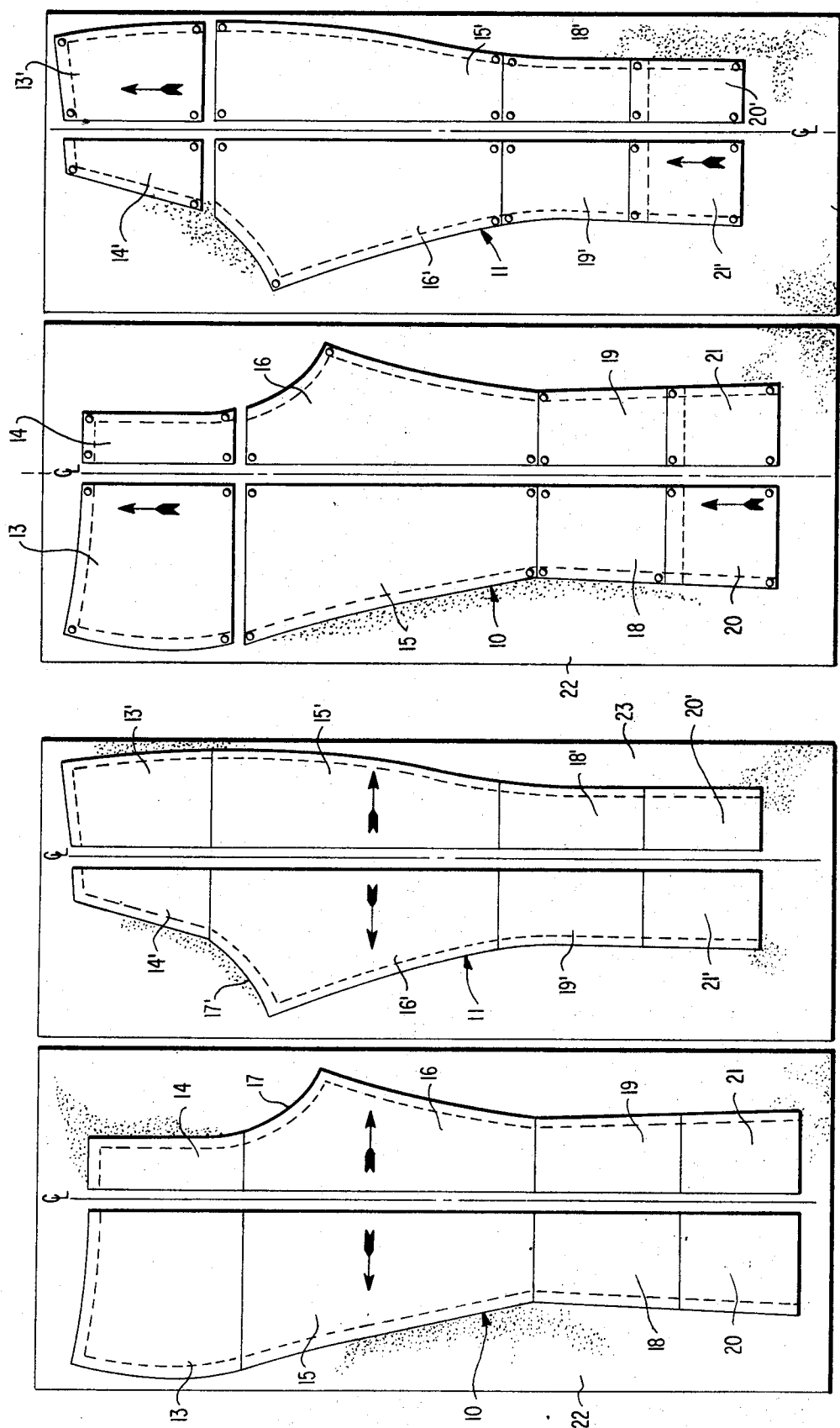


FIG 4

FIG 3

GARMENT PATTERN MAKING DEVICE AND METHOD

BACKGROUND OF THE INVENTION

The garment and pattern industries have evolved certain standard dimensions for the human body and these standardized dimensions have been converted into tables of standard garment sizes for various articles of apparel including pants or trousers. The present invention is directed to improvements in methods and devices for producing pants patterns of a customized nature, although the principles of the invention are applicable to a variety of garments.

In the case of full length pants, the mentioned industry standard sizes break down into several important dimensions, namely, waist size, hip size, crotch depth or length, thigh and calf girth, and overall length. Some of these dimensions are more important or critical than others and among the most important, in the case of pants, are hip size and crotch depth. In the case of pull-on pants, with elastic waistbands, waist size is not critical.

The major aim of the invention is to provide the pattern making industry with an improved method and device for producing a much wider variety of patterns than the customary few standard sizes, such as sizes 10, 12, 14, 16, etc. By utilizing the invention method, individual or customized pattern variations can be created, such as a size 16 with an enlarged hip measurement and a deeper or shallower crotch built into the pattern, and hence built into the garment constructed by the use of the pattern. The basis for this versatility in pattern making which is the essence of the invention is the utilization of a pattern making template which includes a number of template pieces or sections which are entirely free of physical connection, like the pieces of a jigsaw puzzle. These individual template sections are therefore freely shiftable in relation to each other so that the overall shape and size of the composite template and hence the pattern produced by tracing around the margin of the adjusted template may be varied within wide practical limits. This is the essential and important feature of the invention which satisfies an important industry need heretofore ignored by the prior art.

The known prior art including the patented art reveals various devices and methods for producing garment patterns and for improving patterns and simplifying them. However, in the prior art, all such devices and methods have as their central aim to perfect the drafting and producing of a pattern made to the industry's standard dimension or sizes; and the prior art has conspicuously lacked in any teachings which would enable the pattern industry to readily produce variations in the more important body dimensions, such as hip size, crotch depth and thigh girth. Again, the present invention satisfies this need.

The precise number of sections employed in the multi-section pattern making template and the marginal shapes of the template sections may be varied within the principles of the invention and such variations will be determined largely by style considerations which prevail at a given time. For example, the present invention has been illustrated in the application in connection with the very popular present day bell-bottom pants for women. As stated, the invention is applicable

to other types of pants and totally different types of garments.

Additional and more detailed features of the invention will be more readily understood during the course of the following description.

BRIEF DESCRIPTION OF DRAWING FIGURES

FIG. 1 is a composite plan view of front and rear multi-section freely adjustable templates employed to produce a pair of pattern sections which make up one leg of the garment.

FIG. 2 is a similar plan view showing the use of the templates for drafting a standard size pant leg pattern on paper or the like.

FIG. 3 is a further plan view illustrating adjustment of the template sections with respect to center lines to increase the hip measurement of the pants.

FIG. 4 is a similar plan view showing further adjustments of certain template sections to increase the crotch depth of the garment and to adjust the leg length to a prescribed dimension.

DETAILED DESCRIPTION

Referring to the drawings in detail wherein like reference numerals designate like parts, FIG. 1 is an illustration of front and rear multi-section templates 10 and 11 employed to produce front and rear pattern halves or sections for the making of a pair of pants. For convenience, as shown in FIG. 1, the individual segments or sections of each template 10 and 11 may be numbered in the order shown and these numbers may be permanently imprinted on the individual sections. This is an optional feature. The material from which the templates are made may be varied, for example, plastic, cardboard, sheet metal or the like may be used. The template parts may be equipped with certain conventional indicia and features not important to the present invention and this may include marginal additions of material indicated by the broken lines 12 to assure that the pattern will contain enough excess material for proper seaming and hemming. Certain other conventional indicia, notches and the like found on commercial patterns, may be provided.

Continuing to refer to the drawings, the template 10 for the front of the leg comprises an upper totally unconnected pair of sections 13 and 14 which coact to establish a waist size for the garment and a hip size as well as a portion of the crotch length. The rear template 11 in a similar manner possesses upper template sections 13' and 14' which are free from connection and therefore independently movable in any direction. The sections 13' and 14' also coact in establishing the waist and hip size and a part of the crotch length as embodied in the rear portion of the pant leg. As previously explained, the marginal edge contours of the pattern sections are established largely as a function of styling and therefore are subject to some variation. The division or separation of the adjacent sections 13 and 14, and 13' and 14', and hence the relative sizes of these sections is determined with reference to a theoretical center line as indicated graphically.

Continuing to describe the templates 10 and 11, the same further comprise coacting pairs of sections 15 and 16 and 15' and 16' of relatively large size and being elongated lengthwise of the pants' shape in comparison to the uppermost sections 13-14 and 13'-14', already described. The template sections 15 and 16, and 15'

and 16', coact to establish in the pattern being produced and hence in the garment a thigh size or girth and length and the remainder of the crotch dimension as embodied in the arcuate edge portions 17 and 17' of the template sections 16 and 16'. In like manner, the front and rear pant leg templates 10 and 11 further comprise coacting pairs of unconnected independently movable calf sections 18 and 19 and 18' and 19' and these elements coact, when properly adjusted relative to each other and to the other sections of the template to produce in the pattern and ultimately in the garment the desired calf size.

Finally, the templates 10 and 11 include bottom end sections 20 and 21 and 20' and 21', in pairs, as shown, and freely adjustable. These terminal sections of the front and rear templates produce in the pattern the desired bell-bottom flair or other desired effect on the pant leg.

The use of the above-described multi-section templates for the front and rear portions of a pant leg are employed in the practice of a method of producing a full pants pattern in the following manner.

Referring to FIG. 2, the numerals 22 and 23 designate sections of kraft paper, tissue paper or the like upon which the front and rear pattern sections for a single pant leg are produced by tracing around the marginal edges of the assembled and adjusted template sections after the same have been fixed upon the paper by the use of thumbtacks, small sections of masking tape, or some similar means. In the illustration of FIG. 2, all of the plural sections of the templates 10 and 11 are assembled in edge-to-edge abutting relationship, or with no spacing between them. Under such circumstances, the templates will produce on the pattern paper the basis for a standard garment or pants size. In the case of the standard size, the important dimensions (standard) to be produced in the garment will fit an individual with the following body measurements:

STANDARD SIZE

Waist — 26 inches

Hip — 36 inches

Crotch — 27 inches

Thigh — 19 inches

Calf — 15 inches

Length — 40 inches *(Waist to ankle)

With the templates 10 and 11 fixed on the paper sections 22 and 23 in edge-to-edge contact, FIG. 2, the user traces around the entire marginal edge of each template with a pencil or the like to lay out the desired pattern portions on the two sheets of paper. The templates are then removed and the two pattern halves are trimmed and otherwise perfected. Even though the pattern sections are in contact with each other in FIG. 2, their interior longitudinal edges are still positioned on and symmetrical with the center line of the garment and the pattern. It will be understood that the two pattern sections for one leg must be duplicated to produce the second leg of the garment necessary to produce a complete pair of pants.

FIGS. 3 and 4 depict further adjustments of the multisection templates 10 and 11 required to make a pattern having certain required dimensional or size variations from the above standard. In other words, the adjustable template is being employed in FIGS. 3 and 4

to make a customized pattern which is somewhat different from the standard size.

For example, the new dimensions to be drafted into the customized pattern may be for an individual with the following body measurements:

Waist — 28 inches

Hip — 40 inches

Crotch — 28 ½ inches

Thigh — 19 inches

Calf — 15 inches

Length — 39 ½ inches *(Waist to ankle)

Returning to FIGS. 3 and 4 of the drawings, to achieve these dimensional changes in the pattern being produced, the first step is illustrated in FIG. 3. As shown therein, all of the template sections of the front and rear templates 10 and 11 are moved apart laterally by a total distance of one inch and this movement of the template sections is done in such a manner that the adjacent coacting pairs of sections 13-14, 13'-14', etc. are still symmetrically arranged with respect to the center line and spaced equidistantly on opposite sides thereof. Prior to assembling the template sections and adjusting them in FIG. 3, the center line is actually drawn by the use of a straight edge on the paper sheets 22 and 23. The straight interior edges of the several template sections are parallel with the center line after shifting to the one inch spacing. This adjustment of the templates 10 and 11 will add a total of two inches of girth to the hips for the portion of the garment represented by one pant leg and the identical operation of the two templates in connection with the other leg of the garment will add a total of four inches to the hip size to thus meet the objective set for the customized pattern. It may be mentioned here that the hip and crotch dimensions are particularly critical and important to proper comfort and fit of the garment. The waist size, particularly with elastic waist pull-ons, is not too important and can be regulated to a certain extent with the elastic. Other non-critical dimensions including thigh and calf can be achieved in the pattern by trimming.

Since a total of one and one-half inches must be added to the length of the crotch (measured from the waistline center front vertically to the waistline center rear), the upper template sections 13-14 and 13'-14', FIG. 4, are now moved upwardly and away from the sections 15-16 and 15'-16' by three-quarters of an inch in each template 10 and 11. This will add a total of 1½ inches to the crotch length and thus will meet the required new dimension established for the particular customized pattern being produced.

This adjustment of the crotch dimension has added three-quarters of an inch to the overall length of the templates 10 and 11 and since the desired new length to be established is 39 ½ inches, it is necessary to shift the lowermost template sections 20-21 and 20'-21' upwardly 1¼ inches relative to the remainder of the templates. As shown in FIG. 4, the template sections 20-21 and 20'-21' will overlap the lower edges of the sections 18-19 and 18'-19' by a distance of 1¼ inches. The arrows shown in FIGS. 3 and 4 indicate the directions in which the particular template sections are moved in making the above-described adjustments.

For the example under consideration, the operation is complete as shown in FIG. 4 and all of the template sections are now secured to the underlying paper sheets 22 and 23 with thumbtacks and the like. Following this, the complete outline of each template 10 and 11 is traced onto the paper and the templates are removed and the paper sheets are now trimmed along the drawn lines to produce the paper pattern. Each pattern section is now folded lengthwise on the center line and may be further trimmed to produce the proper fit for thigh and calf, as required in the new custom dimensions given above. The two most critical dimensions, namely hip size and crotch length for the customized pattern, have now been very accurately established by the above described movements of the template sections as shown in FIGS. 3 and 4.

It should now be apparent that the template structure and the method utilizing the same is very versatile and convenient for making any desired combination of size changes in a pattern to deviate the same from a standard. Toward this end, the totally free multiple template sections are individually movable in any direction, one from another. This principle, while particularly adaptable to pants, may be utilized in producing patterns for various garments. Unusual or deformed human figures can be properly fitted in this manner and the entire practicality and convenience of home sewing can be greatly enhanced by the invention.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be re-

sorted to, without departing from the spirit of the invention or scope of the subjoined claims.

I claim:

1. A device for producing from sheet material a personalized garment pattern which may deviate in local regions from a standard pattern size, comprising a plurality of preformed separate freely independently movable relatively rigid template sections adapted to be arranged on said sheet material in plural coacting lateral and longitudinal pairs to outline collectively a pattern piece, said movable template sections being symmetrically arranged with respect to a longitudinal center line on said sheet material, each template section having an interior longitudinal straight edge parallel to said center line and at least one end transverse straight edge at right angles to the longitudinal straight edge of the template section, each template section having at least one exterior contoured edge defining a portion of the marginal shape of the personalized garment pattern piece produced by means of the template sections, said template sections collectively defining the marginal shape and size of a standard garment pattern piece when all of the longitudinal and transverse straight edges of said template sections are in abutment and the longitudinal straight edges are on said center line, selected lateral and longitudinal coacting pairs of said template sections being shiftable toward or away from each other while the longitudinal straight edges are parallel to said center line and symmetrical therewith to produce localized deviations in said garment pattern.

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