May 3, 1938. L. M. BLOOM 2,115,703

GARMENT

Original Filed Feb. 15, 1933 2 Sheets-Sheet 1

Fig. 1.

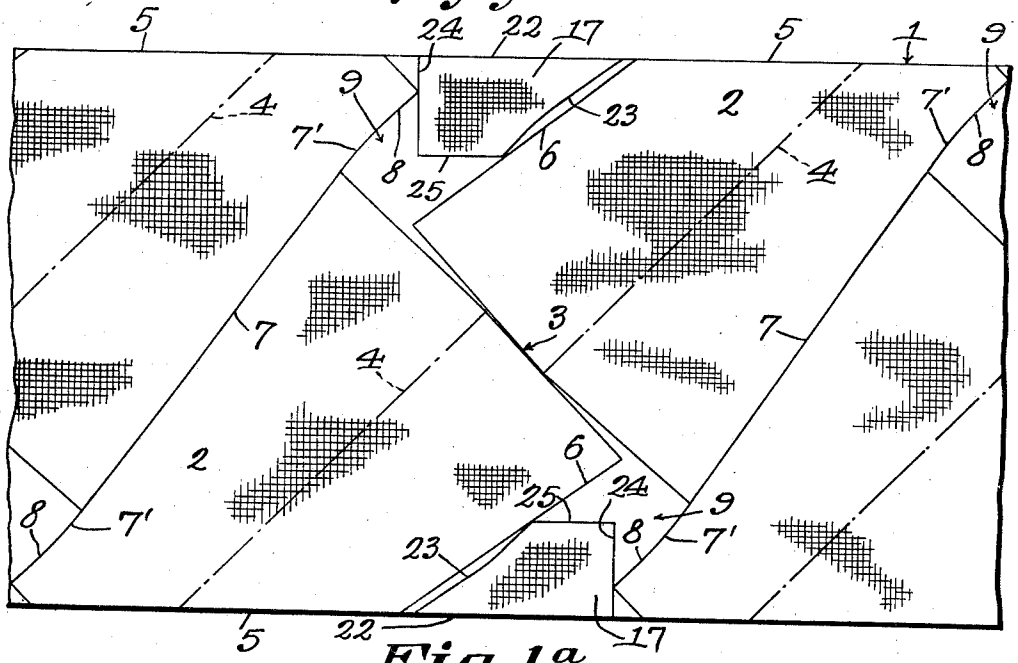


Fig. 1a.

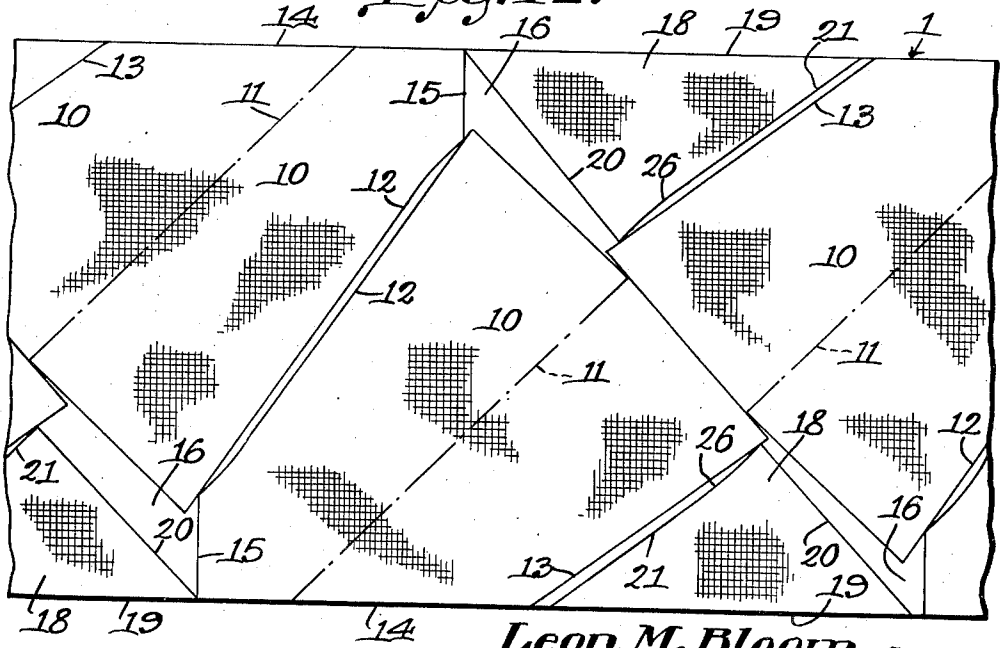


Fig. 16.

32

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GARMENT

Original Filed Feb. 15, 1933 2 Sheets-Sheet 2

Fig. 2.

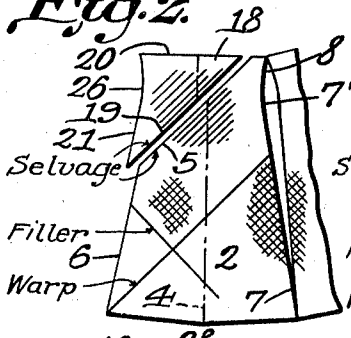


Fig. 9.

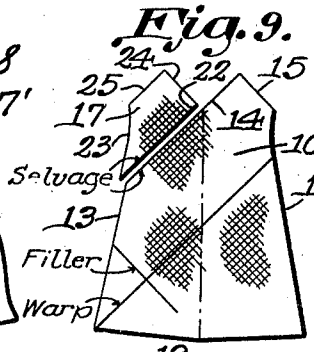


Fig. 6.

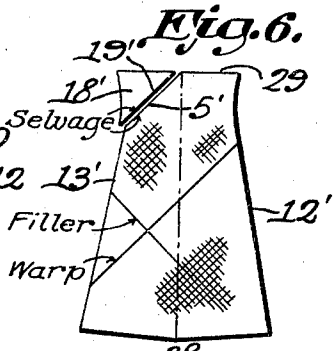


Fig. 3.

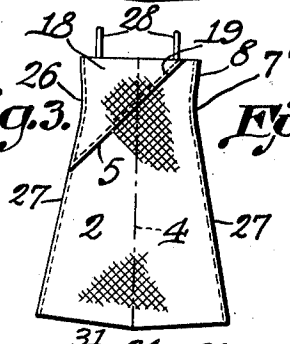


Fig. 4.

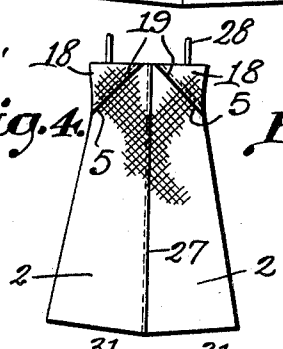


Fig. 5.

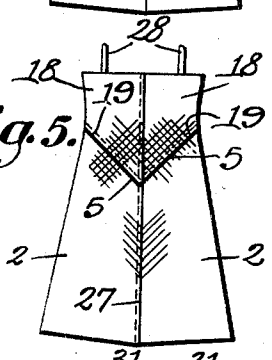


Fig. 10.

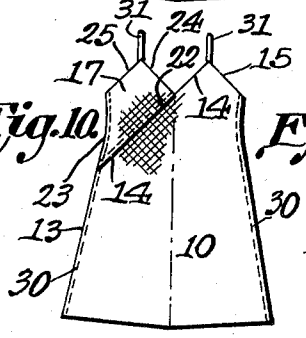


Fig. 11.

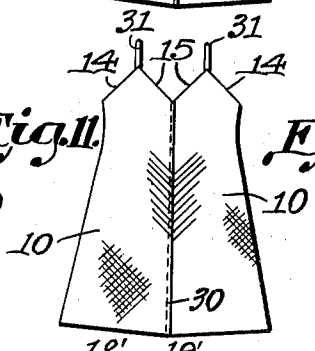


Fig. 12.

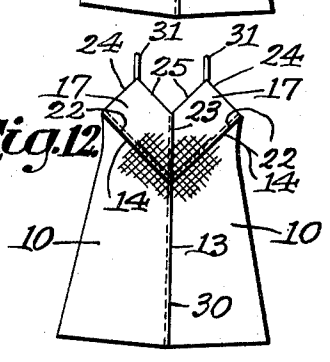


Fig. 7.

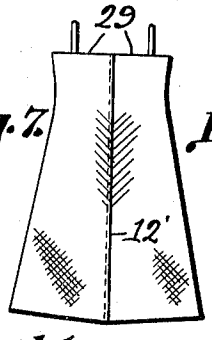


Fig. 8.

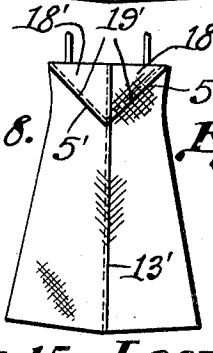


Fig. 13.

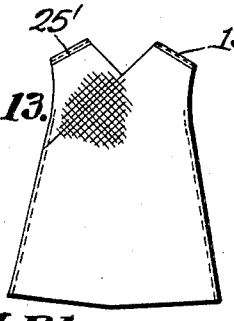


Fig. 14.

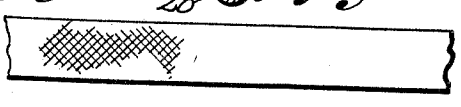


Fig. 15.

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UNITED STATES PATENT OFFICE

2,115,703

GARMENT

Leon M. Bloom, Paterson, N. J.

Application February 15, 1933, Serial No. 656,930
Renewed November 28, 1936
5 Claims. (Cl. 2—73)

This invention relates to garments to be made of knitted or woven fabrics, such as slips, step-ins, night gowns, pajamas, dresses, etc.

Heretofore, in the quantity production of garments, it has been the practice to make a pattern of the garment to be produced and thereafter to lay out the pattern on a long sheet of paper or other material commonly known as a mark. In order that the amount of waste may be reduced to a minimum, considerable ingenuity has been necessary to so place the various patterns on the mark as to fit them together as closely as possible. The garments heretofore produced in this manner have been objectionable for various reasons. Of these objections the principal one has been the failure to cut all of the parts of the garments on a true bias and subsequent failure to assemble the parts so that the direction of the warp of each piece will be the same as that of every other piece.

In a properly prepared panel for a garment the angle of the weave or "grain" of the piece forming the panel should be the same throughout in order to insure uniformity of stretch and resultant saving of time, labor and materials in the production of garments.

It is well-known to those skilled in this art that when two pieces of fabric not cut on a true bias are assembled edge to edge and stitched together the edge of one piece will naturally stretch more than the edge of the other piece with the result that the operator, in an effort to keep the two pieces properly matched, pulls on one of the pieces with more force than on the other. Even though this operation is performed it generally happens that one of the pieces will extend beyond the other piece and leave a portion to be cut off if the garment is to be finished properly on the inside. Aside from the waste of material, the labor and time consumed in the foregoing operation the resultant garment possesses many disadvantages. As the parts are not on a true bias they will stretch in different directions when worn and will fit poorly. Those pieces which have been stitched during the stretching operation will tend to shrink or retract, causing the adjacent unstretched piece to wrinkle and present an objectionable appearance. Furthermore the cutting off of material displaced by stretching leaves less fabric in the garment, reduces the size, and makes the garment unsymmetrical.

It is an object of the present invention to provide a garment consisting of a certain new and novel assemblage of pieces so shaped and arranged that they will not only produce a correctly fitting garment of proper size but will also form a garment all of the pieces of which are arranged on a perfect bias so that they will stretch uniformly when sewed together. The provision of pieces thus made on a perfect bias eliminates faulty assemblage because sewing will not stretch one piece more than the other and consequently there will be no wrinkling or uneven strains on the joined pieces. Furthermore there will be none of the disadvantages due to surplus material produced on one piece by stretching beyond another piece and which must be cut off.

A still further object of the invention is to so design the pieces of the garment that their patterns may be assembled compactly when laying out the mark so as to reduce the waste of material to the minimum and yet insure a perfect bias in each piece when properly assembled with the other pieces of the garment.

A further object is to provide a garment with a panel formed of pieces all cut on the same bias, each piece having a selvage edge, and the selvage edge of each piece being stitched to the selvage edge of another piece to insure correct matching of the pieces while being joined.

Another object is to provide a garment which is of attractive appearance and of such a design that by merely changing the positions of the folds in any one design of garment the design can be changed to present an entirely different appearance without, however, changing the shapes of the pieces or the relative positions of the pieces of which the garment is composed.

Another object is to provide a garment pattern which permits the laying out on a mark of all of the pieces of a number of garments of different sizes and of different patterns, the pieces in every case being cut on a perfect bias and adapted to be assembled to form panels with the warp of all of the pieces of each panel extending in the same general direction.

A further object is to produce a garment in which the waist and/or hip-line can be accurately located and a flare provided therefrom to the bottom of the garment.

A still further object is to provide a garment formed of four pieces which can be quickly and accurately assembled without requiring the services of highly skilled labor and, when assembled, will be neat and symmetrical.

A further object is to shape the pieces of the garment in such a manner that it becomes possible to obtain longer body pieces in a material

of given width than has heretofore been possible.

Another object is not only to reduce the number of pieces making up the complete garment but to correspondingly reduce the amount of stitching required to join the parts, and thereby reducing the labor and speeding up production.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel steps of the method and in certain details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a plan view of a portion of a mark on which have been laid out some of the pieces to be produced.

Figure 1a is a similar view of another portion of the mark on which are outlined pieces differently shaped.

Figure 2 is a plan view showing two pieces of a panel and a portion of another panel assembled prior to stitching for the purpose of producing one style of garment.

Figure 3 is a view of one design of garment of the style produced from the pieces shown in Figure 2.

Figure 4 is a view similar to Figure 3 showing another design of garment produced with the same arrangement of pieces.

Figure 5 is a plan view showing the opposite side of the garment illustrated in Figure 4 and which can be used either as the front or the back of the garment.

Figure 6 is a view of the pieces forming a panel and which are slightly different in proportions from those shown in Figure 2.

Figure 7 is a view of a garment produced with two panels made up of the pieces shown in Figure 6.

Figure 8 is a view of the opposite side of the garment shown in Figure 7.

Figure 9 is a view similar to Figures 2 and 6 illustrating the parts required for making a panel of another style garment.

Figure 10 is a front view of one design of garment produced with the pieces shown in Figure 9.

Figure 11 is a front view of another design of garment produced by the same pieces.

Figure 12 is a view showing the opposite side of the garment illustrated in Figure 11.

Figure 13 is an elevation of a further modification of the garment wherein shoulder straps are dispensed with, this garment corresponding with that shown in Figure 10.

Figure 14 is a view of a strip of left-over material which can be formed into "spaghetti" for use as a shoulder strap.

Figure 15 is a section through one of the said straps formed of "spaghetti."

Figure 16 is a section through one of the seams.

Referring to the figures by characters of reference 1 designates a mark such as used in the quantity production of garments. This mark is adapted to be laid upon a number of thicknesses of the fabric to be cut, the edges of the mark being above the selvages of the fabric and being hereinafter referred to as selvage edges. Before placing the mark in position and cutting the material it is necessary to outline thereon the patterns of the various pieces to be cut. It is intended to lay out the body pieces 2 with their large ends coming together as indicated at 3 but disposed in abutting relation. The center lines of these pieces 2 are along a true or perfect bias as indicated by the dotted lines 4. The sides of each piece are laid off so as to converge toward the selvage edge 5, these sides being indicated at 6 and 7. The sides 7 extend beyond the wide end of the next adjoining piece and can be extended at an obtuse angle as shown at 8 to locate the waist-line at 7'. This will leave a block of material 9 at each side of the mark between the large and small ends of adjacent pieces 2 and these blocks are adapted to receive the patterns of the small shoulder pieces of a garment.

The parts thus far described are laid out on one part of the mark. At other places on the mark there can be laid out the pieces of a garment of another style. The body pieces of this second style have been indicated at 10 in Figure 1a and are placed with their large ends together, the longitudinal centers of the pieces, indicated at 11, being along the true bias. The sides 12 and 13 of each body piece 10 converge toward the selvage edge 14, the short side 13 being extended up to the edge of the mark while the long side 12 extends to an edge 15 extending at right angles from the selvage edge 14 to a point which is on a line located mid-way between the edge 12 and the center line 11 of the body piece. By arranging the body pieces oppositely and end to end, blocks 16 are left between the narrow end of each body piece 10 and the broad end of the next adjoining body piece 10.

If the garment is formed of two like panels it is necessary, for the purpose of completing each garment, to have two body pieces and two shoulder pieces. The two body pieces are of the same size and shape and the two shoulder pieces are also of the same size and shape. By employing the two designs of body pieces, which have been illustrated, and laying them out at different points on the mark the blocks 9 which are left between the body pieces 2 will be sufficiently large to form those shoulder pieces 17 which are to be assembled with the body pieces 10, while the blocks 16 provided between the body pieces 10 will be sufficiently large to form those shoulder pieces 18 to be used with the body pieces 2.

Each of the shoulder pieces 18 is substantially triangular with its long side 19 formed by the selvage edge and it is to be understood that the edges 20 and 21 of the shoulder piece can be cut to any shape necessary to produce a desired effect in the finished garment.

Each of the shoulder pieces 17 has its long side 22 formed by the selvage edge and it has one edge 23 extended close to the short edge 6 of the adjacent body piece 2. Another edge 24 is extended from the selvage edge 22 at right angles thereto and is disposed at right angles to another edge 25 which is parallel with the selvage edge 22 and extends to the edge 23.

It is to be understood that the sizes of the body pieces can be varied on the one mark and by arranging the different sizes in proper relation to each other the blocks 9 and 16 formed between the outlined body pieces will be properly proportioned to form one-piece shoulder pieces of different sizes, leaving very little unused material. Most of these small pieces of left-over material can be used. For example the material between the edges 25 and 24 of each block 9 and the edges 6 and 7 of the body pieces can be cut into strips as

in Figure 14 and stitched to form "spaghetti" or tubular shoulder straps (see Figure 15) which will be cut on the bias and thus be smooth, well-finished and stretchable.

As before stated the mark shown in Figures 1 and 1a has been laid out to produce two patterns of garments, it being possible to lay out both patterns in all desired sizes on one mark.

In Figure 2 there has been illustrated a body piece 2 and a shoulder piece 18 assembled to form either the front or the back of one style of garment. It will be noted by referring particularly to Figure 3, that after the fabric has been cut as indicated, the shoulder piece 18 is placed with its selvage edge 19 along the edge 5 of the body piece 2. Thus the web of one piece will constitute, in effect, a continuation of the web of the other piece, both pieces being cut on a true bias. When the two selvage edges 19 and 5 are sewed together they will not stretch unevenly and if they are matched properly the ends of both edges will be correctly located upon the completion of the stitching operation. There will be no tendency to pull one edge more than the other, as where a rough edge is stitched to a selvage edge, and after the two edges have been joined one piece will not wrinkle because of uneven stretching of the pieces. With the two pieces assembled as explained the edge 8 of the body piece 2 will extend upwardly from the waist point 7'. As shown in Figures 2 and 3 the shoulder pieces 18 can have their edges 21 shaped to produce a waist point 26 so that after the pieces 2 and 18 have been assembled the points 7' and 26 will be properly positioned relative to each other and a correct flare or shaping of the garment will be provided to insure proper fitting about the hips of the wearer.

The garment shown in Figure 3 is made up of a front panel and a back panel both of which are of the same construction as shown in said figure, the two panels being joined by side seams 27. It is to be understood that shoulder straps 28 which can be formed of the "spaghetti" produced as heretofore explained or of bands made from narrow strips left from the fabric, are to connect the top edges of the front and back.

By folding the front and back panels along their longitudinal centers and bringing the seams 27 to the centers of the front and back, a garment will be produced which will appear on one side as shown in Figure 4 and on the opposite side as shown in Figure 5. Either of these sides can be used as the front of the garment. The same assemblage and arrangement of parts is used as in Figure 3 and all that is required in order to change the appearance of the garment is to fold it as stated and arrange the shoulder straps 28 where they will be in proper position for use.

It might be stated that by shortening the selvage edge 5' of each body piece 2 so as to leave an end edge 29 extending half across the small end of the shoulder piece 18', (see Figure 6) said shoulder pieces when stitched with their selvage edges 19' secured to the selvage edges 5', will produce a garment such as illustrated in Figures 7 and 8. In this form of garment the body pieces are folded along their longitudinal centers so that the seams produced by the meeting edges 12' of the body pieces will extend along the center of one side of the garment while the seams formed by the meeting edges 13' will extend along the center of the other side of the garment until they join the seams formed by the meeting edges 19' and 5'.

The style of garment produced by the body pieces 10 and shoulder pieces 17 in Figure 9 has been illustrated in Figure 10. This garment likewise is formed of but four pieces, namely two body pieces 10 and two shoulder pieces 17. Each shoulder piece is placed with its selvage edge 22 along the selvage edge 14 of its body piece so that when the parts are stitched together they will appear as in Figure 10. The front and back of the garment are joined along the side seams 30 and the edges 14 and 15 and 24 and 25 will define angular shoulder flaps which can be joined by strips 31.

Obviously the appearance of the garment can be changed by folding the front and back body pieces along their center lines as shown in Figures 11 and 12. Thus one side of the garment will be produced with a central seam 30 while the opposite side will have not only the central seam 30 but also the diverging seams formed by the meeting edges 14 and 22.

Obviously various changes in the shapes of the edges of the parts can be made to change the style of the garment. Furthermore by the exercise of ordinary skill it becomes possible to embody the features thus far described in garments of different kinds such as pajamas, waists, step-ins, etc. For example and as shown in Figure 13 the edges 15' and 25' can be joined to extend over the shoulders to form a night gown.

It is characteristic of all garments produced as herein explained, that they are formed of not more than four pieces and that all of the pieces are on a true bias and are correctly matched, thereby insuring uniform stretching of all of the pieces, correct fitting, and elimination of wrinkles resulting from distortion during the process of manufacture.

It is to be understood that the seams of the garment can be formed in any suitable manner. For example the outer thickness of the lap can be folded back as shown at 32 in Figure 16 and stitched onto the rough edge portion of the inner thickness. One or more rows of stitching can be used.

It is to be understood further that the bottom of the garment can be hemmed or otherwise finished.

Should it be found desirable to cut off the selvage of the material before cutting the pieces forming the garment, said pieces should be arranged in the same manner on the material as has already been explained but instead of each piece having a selvage edge, each piece would be formed with an edge substantially parallel with the selvage. The term "selvage" can be construed as the actual selvage of the material or an edge parallel with the selvage.

What is claimed is:

1. The method of producing a plurality of four-piece garments of the gown or undergarment type and of different sizes with all parts cut on a true bias which includes the step of laying out on a mark a plurality of oppositely arranged substantially similar body pieces extending partly across the mark and disposed end to end with their center lines on a true bias and with diagonal edges formed by the selvage edges, said body pieces being of predetermined sizes and outlines and providing blocks therebetween at the selvage edges, and subsequently laying out in said blocks shoulder pieces to be assembled with the body pieces, each shoulder piece being arranged

on a true bias and provided with a selvage edge adapted to be joined to a selvage edge of one of the body pieces, thereafter cutting material as indicated by the mark, and then assembling the pieces, whereby the resultant garment will consist of four pieces all disposed on a bias and all of which cooperate to form a four piece neck portion.

2. The method of producing a plurality of four-piece garments of the gown or undergarment type and of different sizes with all parts cut on a true bias which includes the step of laying out on a mark a plurality of oppositely arranged substantially similar body pieces extending partly across the mark and disposed end to end with their center lines on a true bias and with diagonal edges parallel with the edges of the mark, said body pieces being of predetermined sizes and outlines and providing blocks therebetween at the edges of the mark, and subsequently laying out in said blocks shoulder pieces to be assembled with the body pieces, each shoulder piece being arranged on a true bias and provided with an edge at the edge of the mark adapted to be joined to the diagonal edge of one of the body pieces, thereafter cutting material as indicated by the mark, and then assembling the pieces, whereby the resultant garment will consist of four pieces all disposed on a bias and all of which cooperate to form a four piece neck portion.

3. The herein described method of making a garment of the gown or undergarment type including a two-piece panel in which the warp of each piece is substantially parallel with the warp of the other piece, said panel being produced from a single width of material, said method including the steps of cutting a body piece and a shoulder piece on a true bias from the edge portions of the material so that each piece has a selvage edge, and thereafter stitching together said selvage edges along lines obliquely disposed relative to the long dimension of the garment to complete the panel, then forming another panel, and finally stitching together the panels at their side edges.

4. The herein described method of making a garment of the gown or undergarment type formed of opposed panels in each of which the warp of each piece is substantially parallel with the warp of the other piece, said panels being each produced from a single width of material, said method including the steps of cutting a body piece and a second piece each on a true bias and each having a selvage edge, and thereafter forming a panel by stitching together along the selvage edge along lines obliquely disposed relative to the long dimension of the garment to complete the panel, and finally stitching together the panels at their side edges.

5. The herein described method of making a garment of the gown or undergarment type formed of opposed two-piece panels in each of which the warp of each piece is substantially parallel with the warp of the other piece, said panels being produced from a single width of material, said method including the steps of cutting a body piece and a second piece each on a true bias and each having a selvage edge, and thereafter forming a panel by stitching together said pieces, both of the pieces being cut and assembled on a bias so that the warp and filler threads of each piece in the panel are oblique to the long and cross dimensions of the garment, and finally stitching together the panels.

LEON M. BLOOM.