May 27, 1952 W. D. HUMPHLETT 2,598,172

SIDE SEAMED SHOULDER SUPPORTED GARMENT WITH SIDE REINFORCEMENTS AND METHOD OF MAKING SAME

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Fig. 3.

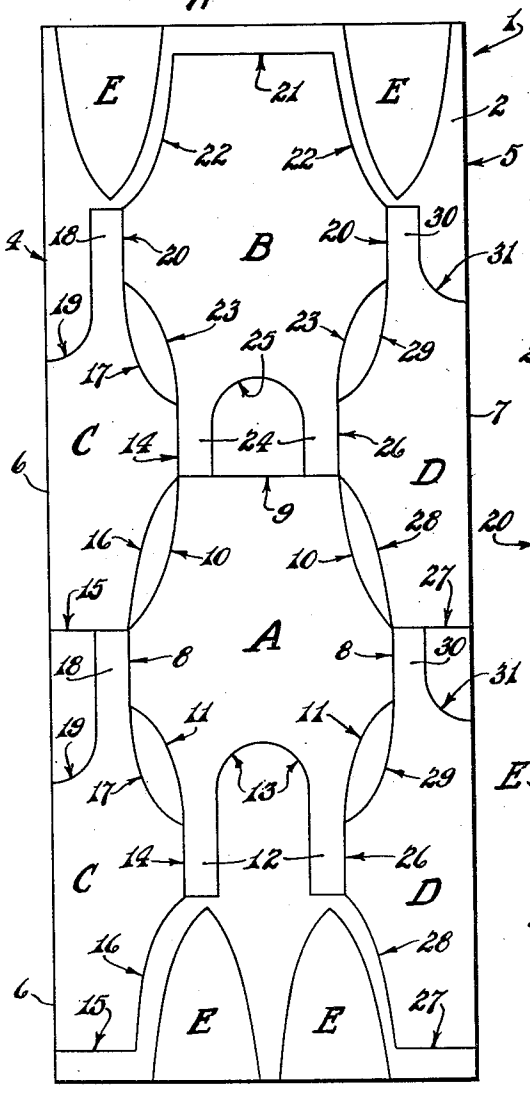


Fig. 1.

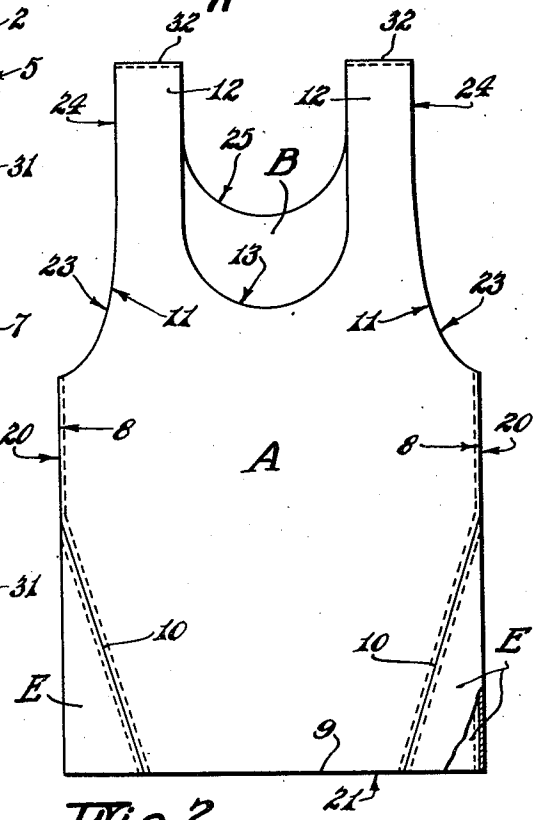


Fig. 2.

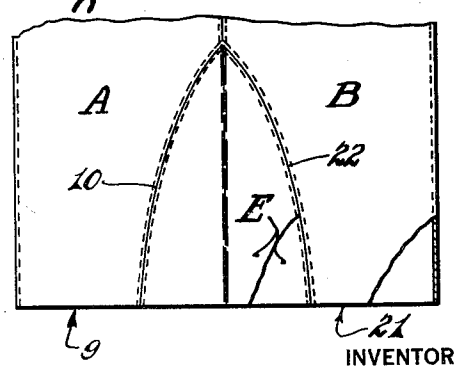
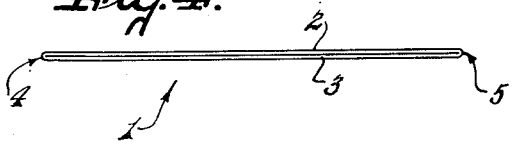


Fig. 4.



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Fig. 5.

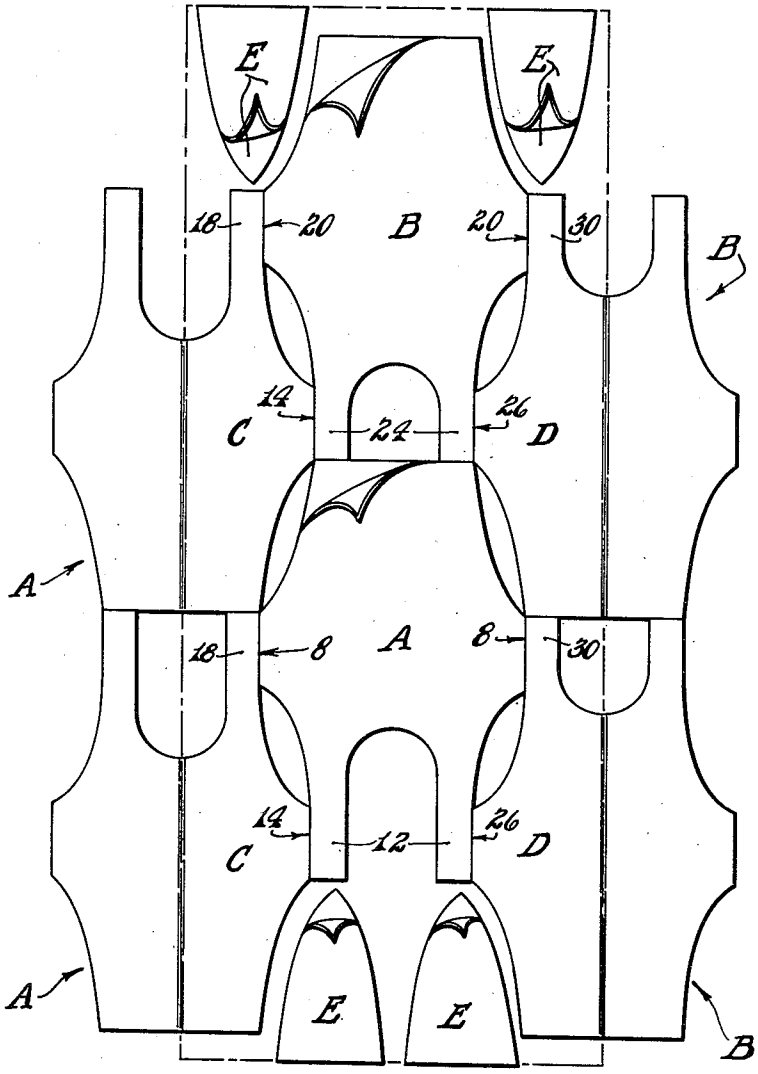
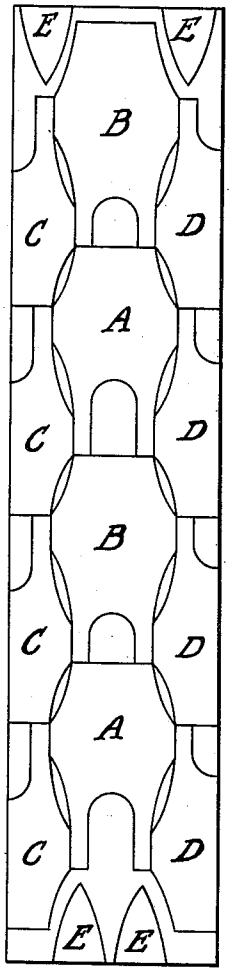


Fig. 6.



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Fig. 7.

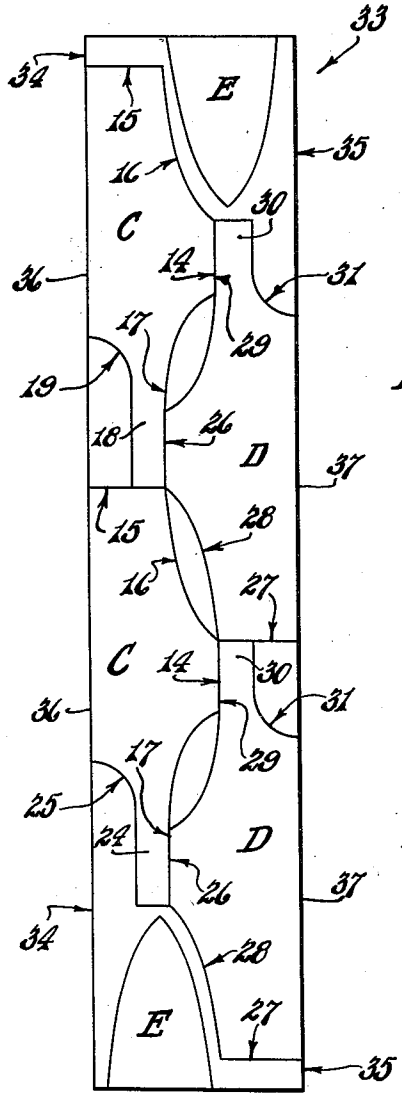
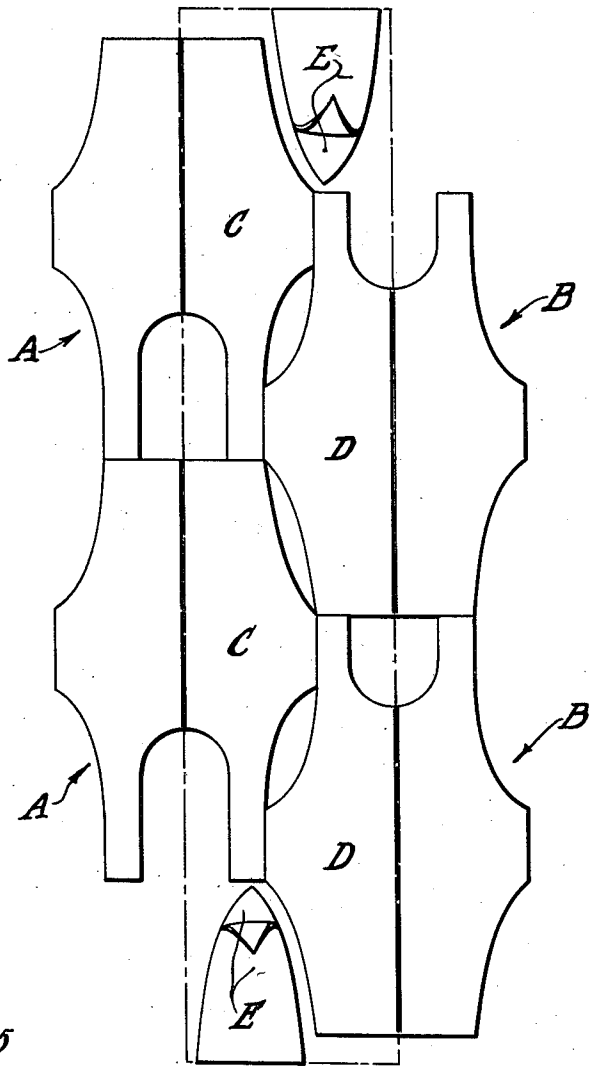


Fig. 8.



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SIDE SEAMED SHOULDER SUPPORTED GARMENT WITH SIDE REENFORCEMENTS AND METHOD OF MAKING SAME

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Application December 7, 1948, Serial No. 63,968

4 Claims. (Cl. 2—113)

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This invention relates to an improved shirt construction and the method of cutting blanks therefor from a flattened tubular web of knit fabric.

More particularly the invention relates to the construction of infants' knit, shoulder supported undershirts having reenforced panels at the sides adjacent the lower edge of the garment, by which a lower garment may be attached to the shirt by pins.

Shirts of this general character have customarily been formed by seaming together front and back members, or cutting suitable neck and arm openings in a length of tubular fabric of suitable diameter and, in either case, stitching a reenforcing patch of desired size and shape to the side portions of the garment adjacent the lower edge.

The cutting of the blanks for garments of this character as heretofore constructed has been wasteful of material and it is the principal object of my invention to provide a shirt construction and a method of cutting the elements therefor which will secure a saving in manufacturing cost, at the same time that an improved functioning of the reenforcing patches is secured.

Other and further objects and advantages will be made apparent in the following specifications and claims.

I have found that by making the reenforced pinning areas of the garment as separate two-ply pieces of generally triangular form which are stitched into openings formed by cutting substantial half-triangle shaped recesses in the side edges of the front and back blanks, which together form the body of the garment, that I can so arrange such blanks in relation to a flattened tube of knit fabric that a substantial saving can be made in fabric which materially reduces the manufacturing cost. Because the strains on both plies of the pinning area are carried in the same manner to the stitches which secure the inserted areas to the garment a more uniform distribution of the strains is obtained than is the case where one of the plies of the area is integral with the body of the garment as in prior constructions.

In the manufacture of garments of this general class it is customary to pile up a number of layers of fabric and after marking the desired pattern on the top layer of the fabric with the use of suitably shaped templates to cut a plurality of front patterns from the piled up fabric, and in the same way cut an equal number of back patterns.

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According to my invention I form the blanks from lengths of tubular fabric. I flatten the tube of fabric to form a two-ply layer which has folded edges at its sides. A plurality of such layers are piled up and the desired patterns cut from them in a manner later to be described.

In the accompanying drawings,

Fig. 1 is a plan view of a form of finished garment, the component parts of which may be advantageously formed by the method of the invention;

Fig. 2 is a side view of the lower portion of the garment of Fig. 1;

Fig. 3 is a plan view of a piece of tubular fabric with pattern markings to indicate the various cutting lines;

Fig. 4 is an end elevational view looking from the bottom of Fig. 3;

Fig. 5 is a plan view similar to Fig. 3 but with portions of the blanks which are formed from the tubular fabric by the cutting operation, folded back;

Fig. 6 shows the method of the invention applied to a piece of tubular fabric of greater length than that of Fig. 5;

Fig. 7 shows the method applied to a piece of tubular fabric narrower than that of Fig. 5; and

Fig. 8 is a plan view similar to Fig. 7 but showing portions of the blanks formed from cutting operation, folded back.

Referring to the drawings, a flattened length of tubular knitted fabric is generally indicated at 1 in Fig. 3 and comprises upper and lower plies 2 and 3 connected along opposite edges by folds 4 and 5. Interfitting and in part contiguous pattern lines are marked on the fabric with the use of suitable templates preparatory to the cutting operation. In Fig. 3 the pattern lines define a full front pattern A, a full back pattern B, two half front patterns C, and two half back patterns D. In addition four reenforcement patches E are outlined. Edges 6 of the half front patterns C coincide with folded edge 4 of the flattened tubular fabric and edges 7 of the half back patterns D coincide with folded edge 5 of the flattened tubular fabric.

In Fig. 3 the outlined full front pattern A includes side edges 8 of the middle zone of the pattern, bottom edge 9, curved edges 10 defining the opening for the reenforcement patches and curved lines defining the outer edges 11 of the arm openings. In addition pattern A has shoulder extensions 12 defined by edges 11 and U-shaped line 13 which also defines half of a neck opening. The folded half front patterns C as shown in Fig. 3 each include a side edge 14

of the middle zone of the pattern, a half bottom edge 15, a curved line 16 defining half an opening for the reenforcement patches and a curved line 17 defining the outer edge of half an arm opening. In addition they each have a shoulder extension 18 defined by the edge 19 of a quarter neck opening and outer edge 17.

Also in Fig. 3 the outlined full back pattern B consists of side edges 20 of the middle zone, bottom edge 21, curved edges 22 defining the opening for the reenforcement patches and curved edges 23 defining the outer edge of half an arm opening. In addition blank B has shoulder strap extensions 24 defined by edges 23 and U-shaped line 25 which also defines half of a neck opening. The folded half back patterns D as outlined each consists of side edges 26 of the middle zone coinciding with the edges 11 and 23 of the adjacent patterns A and B, a half bottom edge 27, curved edges 28 defining the edges of an opening for the reenforcement patches and curved edges 29 defining the outer edges of half arm openings which edges 29, coincide in part with the middle zone edges 8 and 20 of the adjacent patterns A and B. In addition they each have shoulder strap extensions 30 defined by edges 29 and half U-shaped lines 31 which also define a quarter of a neck opening.

As shown in Fig. 5 the patterns indicated in outline in Fig. 1 have been cut from the flattened tubular fabric in the customary manner to form blanks, the blanks formed by the half patterns C and D when unfolded providing full blanks. As will be evident the cutting operation has provided front and back blanks A, B for three complete garments.

The center portion at one end of the strip and the corner portions at the other end provide material for reenforcing patches as indicated at E. Obviously, since double ply reenforcement patches are used on each side of the garment additional reenforcement patches must be cut from separate fabric in order to complete the garment components obtained as above described from the tubular fabric.

Figs. 1 and 2 show front, back and patch blanks from Fig. 5 joined to form a complete garment. As can be seen front and back blanks A and B are stitched together along their respective sides 8 and 20 and the upper edges 32 of shoulder strap portions 12 and 24; bottom edges 9 and 21 and arm cut-out portions 11 and 23 coincide; and two ply reenforcement patch portions E are stitched to the front and back blank at 10 and 22.

As shown in Fig. 6 the pattern arrangement just described can be applied to any desired length of tubular fabric with a corresponding increase in the number of cut blanks. As in Fig. 3, the arrangement of Fig. 6 comprises a row of alternate front and back full patterns A and B centrally disposed on the length of tubular fabric, with interfitting half patterns C and D along the folded edges of the strip, half front patterns C being arranged along one edge and half back patterns D being arranged along the other edge.

A modification of the above described arrangement is illustrated in Figs. 7 and 8. In Fig. 7 a narrower length of flattened tubular fabric 33 having folded edges 34 and 35 is marked by the use of suitable templates to form outlines for half front patterns C, the edges 36 of which coincide with the folded edge 34 of the flattened tubular fabric 33, and interfitting therewith, but extending in the opposite direction, outlines for half back patterns D, the edges 37 of which coincide with edge 35 of fabric 33. In addition reenforcement patch patterns E are arranged as indicated one at each end of the fabric 33.

The middle zone edges 14 of the half front patterns C coincide with the outer edges 29 of the shoulder extensions of the adjacent half back patterns D, and the middle zone edges 26 of the half back patterns D coincide with the outer edges 17 of the shoulder extensions of the adjacent half front patterns C. The bottom and top edges of adjacent patterns are contiguous.

When the patterns outlined in Fig. 7 are cut and unfolded, as in Fig. 8, equal numbers of full front and back blanks are provided.

As is apparent the waste resulting from the cutting operation is reduced to a minimum due to the interfitting of the pattern outlines made possible by the novel shirt construction. Furthermore by the described arrangement of the patterns in relation to the flattened web a minimum of cutting strokes are required and these cuts can be made with ease and efficiency by relatively unskilled operators.

While the cutting of a single length of two-ply flattened tubular web has been described it will be understood that in ordinary practice a plurality of such lengths will be piled up and cut simultaneously in the manner described. The flattened tubular fabric is more easily handled because of its folded edges than is a single ply bolt or roll of fabric.

It will also be understood that sleeves may be inserted if desired in the arm openings and that the shoulder extensions may be overlapped and seamed along their outer edges rather than seamed in abutting relation.

What I claim is:

1. A shoulder supported shirt formed of knitted material which comprises front and back blanks each blank having a full width middle zone, the edge portions of the middle zones of the front and back blanks being stitched one to the other to form vertical side seams, the upper portion of each blank being formed with a neck opening, the outer side edges of the front and back blanks above said zone extending inwardly and upwardly to form, with the neck opening, shoulder extensions, the extensions of the front and back blanks being seamed one to the other to form shoulder straps, the side edges of the front and back blanks below said middle zone being curved inwardly to make the width of the lower edge of each blank substantially equal to the shoulder width and form generally triangular openings at the lower side portions of the garment and two-ply members fitting into said openings, the edge portions of said members being stitched to the adjacent edge portions of said openings the upper ends of said last-named stitching at each side of the garment intersecting each other and the lower end of the adjacent side seam.

2. The method of cutting blanks for a shoulder supported shirt of the character described in claim 1 which comprises flattening a length of tubular knitted fabric to form a two-ply web having folded parallel edges, cutting a continuous series of half front patterns in abutting end to end arrangement from one edge portion of the web and a continuous series of half back patterns in abutting end to end arrangement from the opposite edge of the web, that edge of each said half pattern corresponding to the centerline of a full

pattern coinciding with a folded edge of the web.

3. The method recited in claim 2 in which the half patterns all extend in the same direction, the half patterns at one edge of the web being directly opposite and spaced from the half patterns at the opposite edge of the web, and cutting alternate full front patterns and full back patterns lengthwise of the web between the adjacent longitudinal edges of the half patterns, said full patterns extending in the direction opposite to the direction in which the half patterns extend, the end edges of the adjacent full patterns being contiguous, the edges of the middle zone portion of the half patterns and the outer edges of the shoulder extensions of the adjacent full patterns being contiguous, the edges of the middle zone portions of the full patterns being contiguous with the adjacent edges of the adjacent shoulder extensions of the half patterns.

4. The method recited in claim 2 in which the half patterns along opposite edges of the web extend in opposite directions and the half patterns along one edge of the web are arranged in staggered relation to the half patterns along the other edge.

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