March 16, 1948. W. W. ARTZT ET AL 2,437,989

GARMENT AND METHOD OF MAKING THE SAME

Filed Jan. 29, 1946

Fig. 1

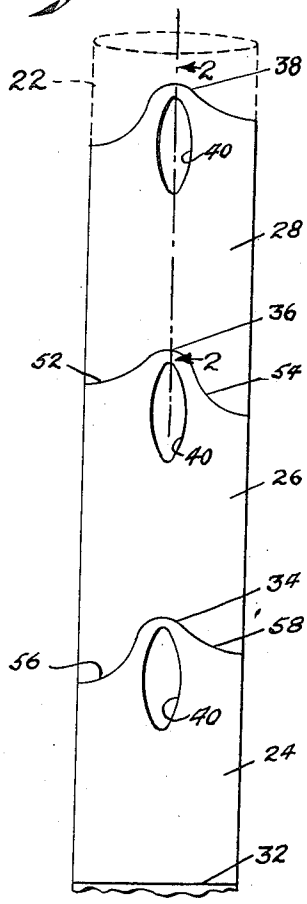


Fig. 2

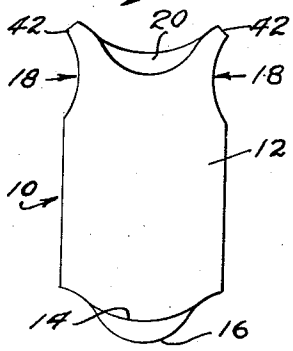


Fig. 3

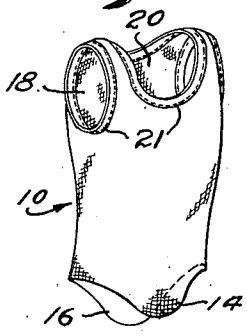


Fig. 5

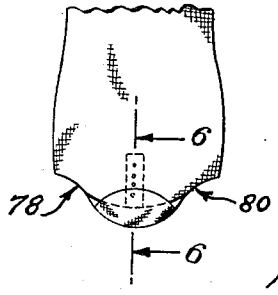


Fig. 4

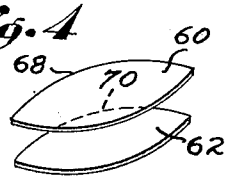
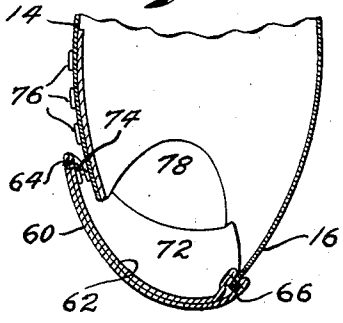


Fig. 6



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GARMENT AND METHOD OF MAKING THE SAME

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Application January 29, 1946, Serial No. 643,996

1 Claim. (Cl. 2—78)

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The present invention relates to garments and the method of making the same, and is particularly directed to under garments, such as, undershirts or the like, of the sleeveless, neckless, slip-over type.

It has been customary in forming garments of the character indicated by prior methods to cut a flattened tube of fabric transversely at the top and bottom of the length corresponding to the length of the garment to be formed. The straight or transverse cut at the bottom forms the bottom or lower end of the garment. A U-shaped portion is then cut at the top of the tubular section or length thus formed intermediate the sides thereof, to form a pair of U-shaped openings at one end in each wall of the tube, the tube is then cut transversely from one side towards the middle along an arcuate contour to provide the front portion of a neck opening, after which the tube is cut transversely from the other side towards the middle along an arcuate contour to provide the back portion of the neck opening. The U-shaped openings and the neck portions provide four strap-like sections. The tube is then folded into a longitudinal plane perpendicular to the plane in which the tube was flattened while the cutting operations were performed, and the ends of adjacent pairs of the strap-like sections are then seamed together to provide shoulder straps. When the strap-like sections are so joined the U-shaped openings are closed to form the arm holes of the garment and the front and back neck portions form the neck opening.

The prior method of making the garment as just described has several disadvantages. In cutting the tubular material in a straight transverse line to secure the proper garment length and then cutting portions out of the other end as described, the cut out portions are discarded, resulting in the waste or loss of material. Another disadvantage is that where front and rear flaps are required on the garment, the material is cut away at the sides of the lower end to provide such flaps, the material thus cut away also being discarded, resulting in further waste of material.

The present invention aims to overcome the foregoing difficulties by providing an improved garment of the sleeveless, neckless, slip-over type and a method of making the same wherein there is no waste or loss of material.

Accordingly, it is an object of the present invention to provide an improved garment of the character indicated.

Another object is the provision of a garment wherein the severing of the top of one garment

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blank provides complementary flaps at the bottom of the adjacent garment blank.

Another object is to provide such a garment wherein the portions cut away from the garment material in forming the arm holes of the garment are employed to provide an improved garment.

A further object resides in the provision of a garment which will fit the user more comfortably, prevent "riding up" of the garment when worn, and which garment may if desired be worn as a combined shirt and short pants.

Other and further objects of the present invention will be manifest from the following description and the accompanying drawing.

In the drawing:

Fig. 1 is a plan view of a flat tube of fabric having superimposed thereon patterns for cutting garments of the present invention;

Fig. 2 is an elevational view of the garment folded substantially into a plane indicated by the line 2—2 on Fig. 1;

Fig. 3 is a perspective view of the completed garment of Fig. 2;

Fig. 4 is a perspective view of portions of the garment removed from the blank during the forming of the arm holes;

Fig. 5 is a plan view of a garment to which the portions shown in Fig. 4 are attached in a manner and for the purpose hereinafter described; and

Fig. 6 is a sectional view on line 6—6 of Fig. 5.

Referring to the drawing, and more particularly to Figs. 2 and 3, there is shown a garment 10 such as an undershirt comprising a seamlessly formed tubular body portion 12 having front and rear flaps 14 and 16 at its lower end, and arm holes 18 and a neck opening 20 at the upper end provided with the conventional binding 21. The rear flap provides a buttocks covering portion and may be provided with means for detachably securing the same to the front flap, as will be described hereinafter.

In Fig. 1 there is shown a flat tube of fabric 22 having patterns 24 and 26 superimposed thereon. When the tube is cut along the transverse line 32 and the arcuate or complex contour lines 34, 36 and 38 and holes 40 are formed therein, garments blanks are formed.

Before placing the pattern on the tube 22, the tube is flattened or doubled upon itself. The first garment blank corresponding to the pattern 24 is formed by cutting the tube 22 transversely along the straight line 32 and then along the complex arcuate line 34. The pattern used in forming this

first garment may be the same as patterns 26 or 28, in which event only the upper end of the pattern is employed, the lower end requiring no pattern inasmuch as the line 32 may be the end of the tube 22 which is cut on a straight transverse line when the tube is made. Cutting along the complex arcuate line 34 forms the front and rear neck portions of the garment as more fully shown and described in copending application Serial No. 611,025, now Patent Number 2,414,048, granted January 7, 1947.

Arm holes 40 are formed in each layer or wall of the material at the middle of the tube adjacent to but spaced from the upper edge a distance whereby the upper portions of the arm holes provide seamlessly joined shoulder strap sections 42, as also more fully shown and described in the aforesaid pending application.

The first garment blank thus formed is folded into a longitudinal plane perpendicular to the plane in which the tube was flattened while the cutting operations were performed, whereby to take the form of the garment of Fig. 2, except that the bottom edge is straight instead of being provided with the front and rear flaps 14 and 16 respectively. After the garment is formed the edges of the neck opening and arm holes may be provided with the binding 21 as shown in Fig. 3.

One garment of the type just described, that is, with a straight bottom edge, is made from each length of tube, it being formed at the end of the tube as aforesaid. The other garments formed from the tube are of the type shown in Figs. 2 and 3 each having front and rear bottom flaps 14 and 16 respectively.

In forming the garment blank for the garment of Figs. 2 and 3, which for convenience of description will be referred to as the second garment blank formed, the pattern 26 is placed on the flattened tube 22 in the manner shown in Fig. 1. This pattern as will be seen from Fig. 1 has a complex contour or arcuate upper edge or end formed of arcs 52 and 54 meeting substantially centrally of the side edges of the pattern. The pattern also has a complex contour or arcuate lower edge or end formed of arcs 56 and 58 which also meet substantially centrally of the side edges of the pattern. A hole 40 is formed in the pattern centrally of its side edges and adjacent to but spaced from its upper edge, as shown in Fig. 1. It will be noted that the contours of the arcs 52 and 56 are the same as each other but are of different contours than the contours of the arcs 54 and 58 which also are the same as each other. When the tube 22 is cut along the line 36 the cut made when cutting along the contour 52 forms the back of the neck opening 20, and the cut made by cutting along the contour 54 forms the front of the neck opening, the front of the neck opening in the garment being lower than the back opening. The arm holes 18 are formed by cutting through both walls of the tubular fabric around the edge of the hole 40 in the pattern. The sections of the fabric thus removed are shown in Fig. 4.

When the first garment blank is formed, in the manner previously described, the cutting of the fabric along the line 34, that is, along the arcuate lines 56 and 58, formed the lower portion of the second garment blank; the portion of the fabric corresponding to, or cut along, the arcuate line 56 formed the edge of the front flap 14 of the garment of Figs. 2 and 3, and the portion of the fabric corresponding to, or cut along, the arcuate line 58 becoming the edge of the back flap 16, when the garment blank is folded along line 2—2 of Fig. 1 as hereinbefore described.

When forming the next garment blank, a pattern 28 or the same pattern 26 may be employed. These patterns as will be seen from Fig. 1, are identical, so that instead of employing two separate patterns one may be employed by reversing the same and placing the reverse face of the pattern on the flattened tube, whereby arcuate line 58 and the arcuate line 56 will coincide with the edges of the fabric cut along the arcuate lines 52 and 54, respectively, when the upper edge of the second garment blank was formed.

In reversing the pattern, in the manner described, and cutting the tube along the arcuate end thereof, there is a considerable saving of the fabric, in addition to saving or eliminating a cutting operation which otherwise would have been necessary, had the pattern not been reversed and a rear flap which is larger than the front flap desired.

When it is desired to provide the garment shown in Fig. 6, the portions or sections 60 and 62 cut from the material in forming the arm holes, as shown in Fig. 4, are utilized. These portions are first fastened to each other along one of their edges by stitching 64 or in any other suitable manner (Fig. 6), and are then secured to the lower edge of the rear flap 16 by stitching 66 or in any other suitable manner. In attaching the sections to the flap 16 the sections are superimposed thereon with their arcuate edges 68 and 70 in alignment with the arcuate lower edge of the flap 16 and secured to the flap by the stitching 66, as shown in Fig. 5, whereby to provide a pocket 72 (Fig. 6), having a double or reinforced front wall.

The upper edge of the pocket is provided on its inside with one member 74 of a snap fastener adapted to engage one of a series of complementary members 76 of a snap fastener secured in vertical alignment on the outside of the front flap 14, whereby detachably to secure the upper edge of the pocket to the front flap. The series of complementary snap fastening members are provided whereby to adjust the pocket as desired.

When the pocket is fastened in closed position, as shown in Figs. 5 and 6, leg holes 78 and 80 are formed.

The pocket in the garment of Figs. 5 and 6 serves as a support, as well as to retain the garment from "riding up" when worn. The garment of Figs. 5 and 6 is also well adapted to be worn as a combination shirt and drawers if so desired by the wearer.

From the foregoing description it will be seen that the present invention provides an improved garment and a novel method of making the same which results in speeding up production, and the saving of material, labor and production costs.

From the foregoing description of our improved method and garments made thereby it will also be appreciated that many operations are eliminated, such as cutting, seaming and stitching, and that a more perfectly fitting garment is provided.

While the present invention has been described in connection with an undershirt by way of example, it will be understood that invention applies to other garments such as slipover sweaters, bathing suits, bandeaux, slips, bras, aprons or in fact any sleeveless, slip-over gar-

ment having shoulder straps or the equivalent.

While we have illustrated and described a preferred embodiment of our invention it is to be understood that we do not wish to be limited thereto as obviously various changes and modifications may be made in the method herein described and the garment illustrated and described without departing from the spirit and scope of our invention.

What we claim is:

The method of forming a garment of the character described from a fabric tube flattened along lines midway of the portions thereof which are to constitute the front and back of the garment, comprising cutting out portions of the superimposed layers of fabric substantially below the upper end thereof to constitute the complete armholes, severing both layers of the flattened tube on a contoured line above the armholes to form the front and back neck portions of the garment with shoulder straps therebetween, severing both layers of the flattened tube on a contoured line at a predetermined point below and

remote from the armholes to form the bottom of the garment, securing the cut-out portions of the fabric to each other and to one of said flaps, and securing separable attaching means to the said portions adjacent the free edge thereof and complementary separable attaching means to the other of said flaps, whereby the said portions will provide a crotch pocket portion when the attaching means are secured to each other.

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