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GARMENT WITH EXPANSIBLE NECK

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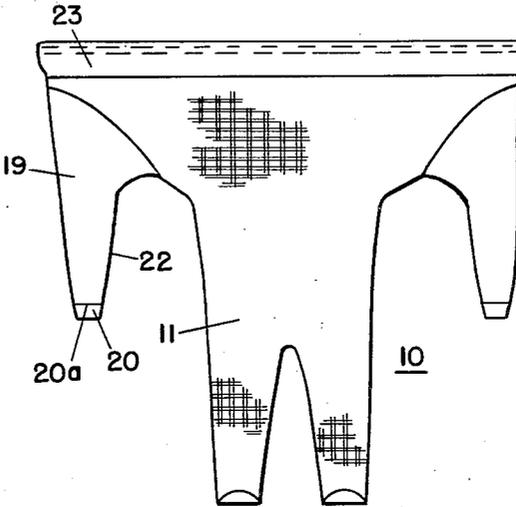
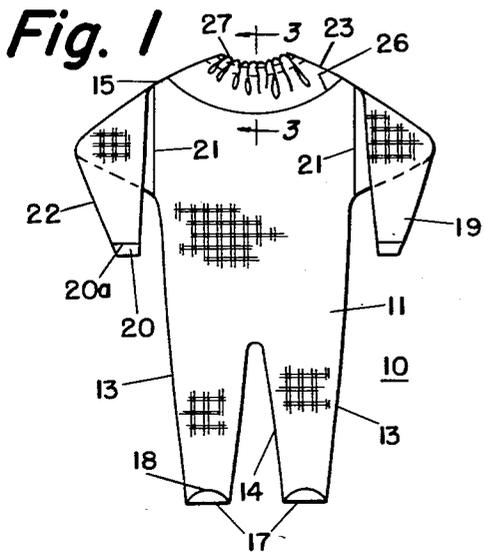


Fig. 2

Fig. 3

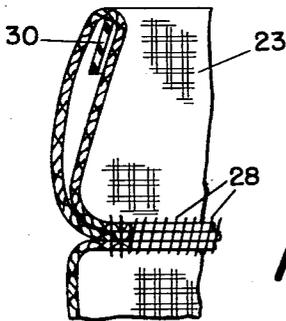


Fig. 4

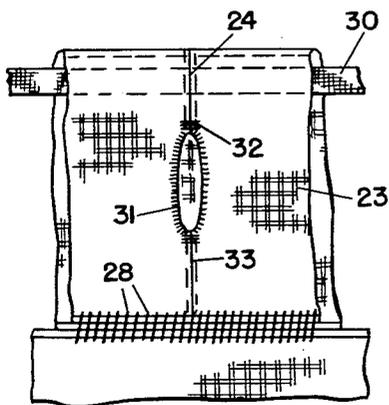
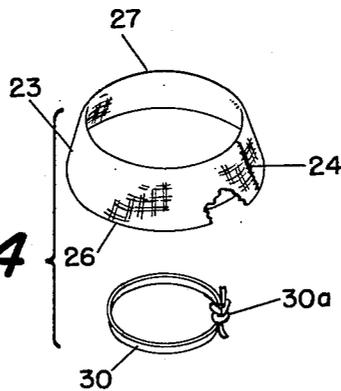


Fig. 5

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GARMENT WITH EXPANSIBLE NECK

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1 Claim. (Cl. 2-78)

This invention relates to garments having substantial transverse and longitudinal resilient stretchability, so as to fit persons of several different sizes, and has for an object the provision of a two-way stretch garment, particularly suited for young children, wherein the neck portion of the garment is expansible to several times its normal size to provide a relatively large opening to permit the garment readily to be slipped over the legs and body of the child.

In children's garments, and particularly in children's one-piece sleeping garments, it is desirable that the garment be of the step-into type, so that the garment may be slipped over the feet, legs, hips and buttocks of the child, and then over the rest of the body. It is also desirable that the opening of the garment may be made substantially larger than the hip and buttock region of the child, so that the garment may easily be pulled up over the child. The foregoing large opening in the garment is particularly important when the child is wearing a diaper, thereby increasing the main body area over which the garment must be passed. In addition, the garment should not have any fastening devices, such as buttons, hooks, snaps or slides, which might cause discomfort to the child, and which may become damaged during use or laundering.

It has been proposed heretofore that children's garments of the step-into type be provided with an expansible neckline to allow the garment to be pulled over the body of the child. One such prior art garment was made of knitted material having the wales thereof running lengthwise. The parts of the garment, including the sleeves, were cut and assembled with an elastic webbing sewed to the neckline to permit the neck opening to expand. In another prior art garment the neckline was cut to the same transverse dimension as the body portion of the garment and a length of partially stretched elastic webbing was stitched tightly in place by means of double-needle loop stitching.

While the neck constructions of such prior art garments have been reasonably satisfactory for their intended purpose they are not suitable for use in two-way stretch material of substantial stretchability where one size of garment is stretchable to fit several sizes of wearers. One substantial disadvantage of the prior art garments is that the expansion of the neck opening is limited to approximately the circumferential dimension of the main body portion of the garment. This limitation in expansion of the opening is particularly due to the stitching or seam which holds the elastic material in place at the neck opening of the garment. Such stitching or seams, being relatively non-elastic, represent an even greater limitation on two-way stretch material, since the stretchability of such material is much greater than in the prior art garments. The foregoing disadvantage in the prior art garments results in considerable difficulty in slipping such garments over the hip and buttock region of the child, particularly when the child is wearing a diaper. In addition, this disadvantage of a limited neck opening in a garment does not allow ease in placing the child's legs and arms within the garment, nor does it permit a two-way stretch garment to be stretched to its maximum size. A further disadvantage of such prior art garments is that, since the elastic material is stitched to the neck opening of the garment, it is not easily replaceable when such

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material becomes weakened by laundering or otherwise. All of such disadvantages have been overcome by the present invention.

In accordance with the present invention, there is provided a garment having substantial transverse and longitudinal resilient stretchability, or two-way stretch, with a novel neck construction which enables the neck opening to expand to several times its normal size along with the body of the garment.

More particularly, there is provided in a one-piece garment made of two-way stretch material a body portion having openings for the legs, arms and head of the wearer and a neck portion of two-ply construction. The neck portion is formed from an endless strip of folded two-way stretch material and has an expansible seam or stitching at the outer circumference thereof along the free edges of the folded neck portion forming the two-ply construction and connecting the neck portion to the upper edge of the upper body portion, and a ring of elastic is disposed within the two-ply construction. The neck portion has substantial dimension, thereby extending the neck portion over a substantial portion of the shoulders of the wearer. The elastic ring and the neck portion are stretchable to the maximum amount permitted by the seam in the outer circumference of the neck portion to provide an opening, the transverse dimension of which is substantially greater than the transverse dimension of the main body portion of the garment, thereby allowing the garment to be readily slipped over the body of the wearer.

In a preferred embodiment of the invention for use particularly in a one piece child's garment, the elastic ring has a width several times less than the longitudinal dimension of the neck portion and an unstretched circumference substantially less than the unstretched inner circumference of the neck portion, thereby gathering the neck portion to fit snugly about the neck of the wearer. The elastic ring and the neck portion are stretchable to a transverse dimension about six times as great as the normal transverse contracted dimension of the neckline to provide an opening about 20 times greater in area than the opening of the contracted neckline.

In accordance with another aspect of the present invention, there is provided a buttonhole or opened seam on the longitudinal dimension of the neck portion, thereby allowing ease of access to the elastic ring which may readily be replaced.

For other objects and advantages of the present invention reference may now be had to the following detailed description taken with the accompanying drawings in which:

FIG. 1 is a front elevational view of a one-piece garment, suited for a sleeping garment for a child, embodying the present invention;

FIG. 2 is the one-piece garment of FIG. 1 showing the neck portion in its stretched condition;

FIG. 3 is an enlarged vertical cross-sectional view taken generally along the line 3-3 of FIG. 1, showing the construction of the neck portion;

FIG. 4 is a perspective view of the neck portion and the elastic ring, both being in unstretched condition; and

FIG. 5 is an enlarged fragmentary front elevational view of a modification of the neck portion showing a buttonhole or opened seam for access to the elastic ring.

Referring now to FIG. 1, there is illustrated a one-piece garment 10, made of knitted stretch material, and particularly suited as a sleeping garment for children. The stretch material is well known in the knitting art and is woven of a stretchable yarn in such manner that the material has substantial transverse and longitudinal resilient stretchability. Thus, the material may be stretched in substantially all directions and is commonly known in the art as "two-way" stretch material.

The garment 10 includes front and back panels 11 of the two-way stretch material which are stitched together along left and right side seams 13, the inner leg seam 14 and the shoulder seam 15. The sole panels 17 are stitched to the front and back panels 11 along the foot seams 18. The sleeve panels 19 of the two-way stretch material are added by way of an arm seam 21 and an underarm seam 22; cuffs 20 are added by way of seams 20a.

The ring-shaped neck portion 23 is of two-ply construction and is formed from a separate piece such as the endless strip of the folded two-way stretch material, as indicated particularly in FIGS. 3 and 4. The neck portion 23 may be cut either straight or along a slight bias and stitched together along a vertical seam 24. The free edges of the folded neck portion 23 are stitched by way of an expansible seam 28, FIG. 3, to the upper edge of the body portion including the front and back panels 11, along the outer circumference 26. As shown in FIG. 1, the body portion 11 extends upwardly into the shoulder regions of the garment and terminates in an upper edge extending circumferentially of the upper body portion at 26. The upper edge of the body portion is spaced from the neck opening 27, FIG. 1, and has a size substantially as great as the transverse dimension of the body portion in unstretched condition. It will be noted that the neck portion 23 has substantial width so that the neck portion extends not only over the neck, but also over a substantial portion of the shoulders of the wearer. Thus, the seam 28, FIG. 3, is displaced a substantial distance from the inner circumference or neckline 27, FIG. 1. In addition, the shoulders, defined by the seam 15, formed by the front and back panels 11, are of relatively small size. The construction as described above eliminates the need for a seam at the inner circumference or neck opening 27 and allows the upper body portion including the neck portion 23, FIG. 2, to stretch approximately 250% of the maximum transverse dimension of the main body portion of the garment 10.

In order to provide a snug fit of the neckline 27 and the neck portion 23 about the neck and shoulders of the wearer, an elastic ring 30, narrow as compared to the neck portion, FIGS. 3-5, is disposed within the pocket formed by the two-ply construction of the neck portion 23. As illustrated in FIG. 4, the elastic ring 30 is formed of a strip of elastic material having its ends joined together by way of a knot 30a or other fastening means. The normal unstretched circumferential dimension of the elastic ring 30 is substantially less than the unstretched circumference of the neck portion 23. The elastic ring 30 is disposed within the two-ply neck portion 23, but is not sewn therein or attached in any way. However, the elastic ring 30 will assume a position in the neck portion 23 adjacent to the neckline 27. The reason for the foregoing is that the unstretched circumference of the elastic ring 30 is substantially less than the unstretched circumference of the neck portion, which causes the elastic ring to stretch. In trying to contract, the elastic ring 30 finds its way from the end of the neck portion stitched to the panels 11, which is the outer circumference 26, to the free edge of the neck portion, which is the inner circumference 27.

From the foregoing combination of elastic ring 30 disposed within the pocket formed by the two-ply neck portion 23, it is clearly seen that the neckline 27 as shown in FIG. 1, is caused to gather and provide a snug fit about the neck of the wearer. Not only is the neckline 27 gathered but also the elastic ring 30 causes the entire neck portion 23 to gather and to provide a snug fit over the neck and a substantial portion of the shoulders of the wearer.

Referring now to FIG. 2, there is illustrated the one-piece garment 10 of FIG. 1 in its stretched condition. Stretching of the garment is most conveniently done by stretching the neckline and the shoulders with the hands.

It will be noted that in comparison with the unstretched neckline 27, the stretched opening is approximately six times its transverse dimension, or, in other words, the stretched opening has an area about twenty times that of the area of the opening of the unstretched neckline 27.

The foregoing high degree of stretchability of the neckline 27 and of the neck portion 23 is particularly due to the fact that said neckline may expand to the limit of stretchability of the knitted two-way stretch material. Since the outer circumference 26 of the neck portion 23 is secured to the body portion by means of a seam 28, the outer circumference 26 is limited in its expansion by the amount of expansion of the seam 28. As the outer circumference 26 expands the seam 28 also expands and the stitching within the seam 28 will permit such expansion until the stitching becomes taut. Any further expansion of the seam 28 will cause a tearing of the stitching. However, since the outer circumference is relatively large with respect to the main body portion, even in its unstretched state, it may easily be stretched to the position illustrated in FIG. 2 with no resulting damage to the stitching in the seam 28.

In stretching the neck portion 23 it will be noted that the upper body portion including the regions or areas around the shoulders and upper arms of the garment have also stretched. Thus, the garment may be held open and the legs of the child may be placed within the legs of the garment without the child being hindered by the upper portions of the garment. After the child's legs have been placed within the garment, said garment may be kept in its stretched condition and the arms of the child placed within the enlarged or stretched arm openings. The garment may then be returned to its unstretched condition slowly while the arms of the child are being placed into the arm portions. From the foregoing, it can be clearly seen that the garment of the present invention allows a child to be easily placed therein with a minimum amount of effort.

Another feature of the present invention is that the elastic ring 30 is disposed within the neck portion 23, but is not sewn therein or attached in any way. Thus, the elastic ring may be readily inserted or replaced by another elastic ring of the same size, or of larger circumferential dimension. In particular, a small portion of the seam 24 may be opened and the elastic ring 30 cut and removed. A new strip of elastic material may then be inserted through the opening in the seam 24. The ends of the new strip of elastic material may then be knotted and the seam 24 resewn.

In FIG. 5 an alternative arrangement is shown where the inside of the neck portion 23 is provided with a buttonhole 31 in the seam 24. The seam is sewn up to the point 32 and then is opened to the point 33 at which latter point the seam is then sewn closed. Between the points 32 and 33 the opening of the seam 24 is reinforced by stitching. Thus, there is provided by way of buttonhole 31 a permanent means of access to the elastic ring 30 which obviates the necessity of ripping and resewing the seam 24 if it is desired to replace the elastic ring 20.

The one-piece child's garment of the present invention not only will fit children of different sizes, but will continue to fit the child as he grows. Since the garment stretches in both the longitudinal and transverse directions, it will be apparent that as the child grows all parts of the garment will expand to comfortably fit him. With the novel neck portion construction of the garment of the present invention, said garment may continue to be worn until the two-way stretch material has reached the point of maximum stretchability.

A still further feature of the present invention is that the neck portion 23 and the cuffs 20 are constructed of separate pieces of two-way stretch material. Thus, the neck and cuff portions may be of different colors from the other portions of the garment 10. Accordingly, the cuff and neck portions may be matched in color to form

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a pleasing two-tone combination with the other portions of the garment.

While the garment illustrated in FIGS. 1-5 is specifically applicable to a child's sleeping garment, it can well be understood that the construction of the novel neck portion of the present invention may also be employed in other types of garments. For example, this invention may be embodied in children's undergarments and children's union suits. The garment illustrated in FIGS. 1-5 may be used for summerwear by providing a knitted stretch material of open weave, and/or omitting the sleeves and legs.

With the foregoing in mind, it will be clear that many changes and departures may be made from the particular examples set forth in the specification, all within the scope of the invention as set forth by the appended claim.

What is claimed is:

A one-piece garment suitable for a child and made of knitted two-way stretch material, having a body portion provided with openings for the arms, legs and neck of the wearer, the said body portion extending upwardly into the shoulder regions of the garment and terminating in an upper edge extending circumferentially of the upper body portion and spaced from the neck opening and of a size substantially as great as the transverse dimension of the body portion in its unstretched condition, the

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neck portion of the garment being formed from an endless strip of folded two-way stretch material to provide a pocket therein and adapted to extend over a substantial portion of the shoulders and up around the neck of the wearer, and an elastic ring relatively narrow as compared to the said neck portion disposed within said pocket formed by said folded construction of said neck portion, said elastic ring having a normal relaxed circumference substantially less than the relaxed circumference of said neck portion and thereby gathering said neck portion to fit snugly the neck of the wearer, the free edges of the folded neck portion being connected to the upper edge of the body portion by an expansible seam, the upper body portion including the neck portion having the characteristic of being stretchable to a transverse dimension substantially greater than the transverse dimension of said body portion so that said garment may be easily slipped over the legs and body of the wearer in avoidance of any discomfort.

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