

Dec. 8, 1959

J. S. KAUFMAN
CONVERTIBLE GARMENT

2,915,758

Filed March 14, 1958

4 Sheets-Sheet 1

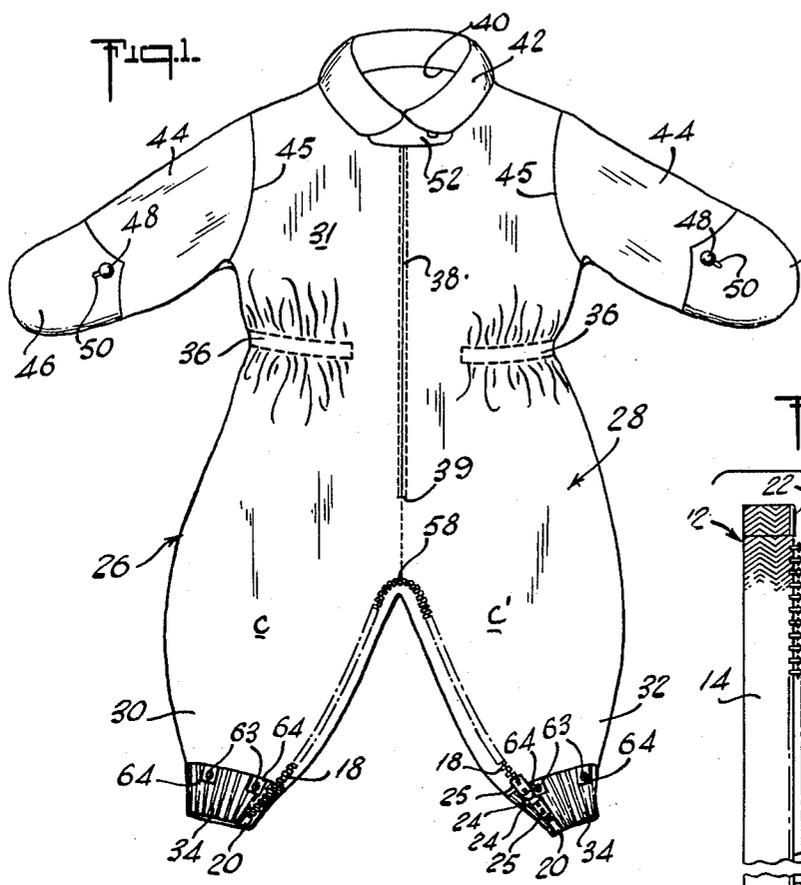


Fig. 5.

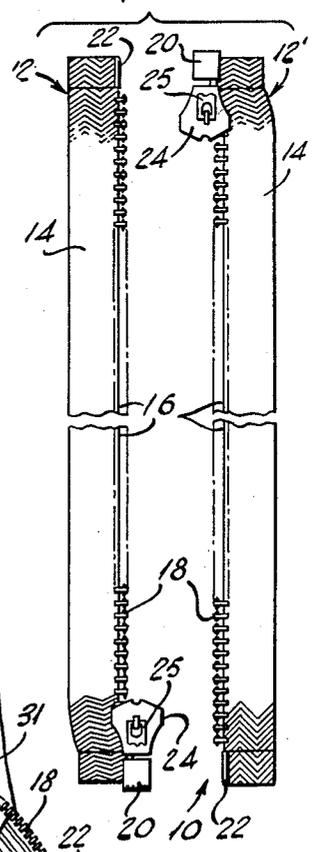
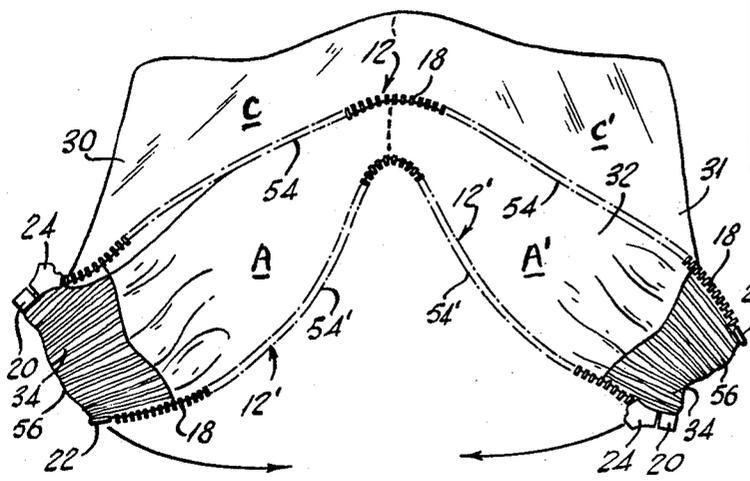


Fig. 2.



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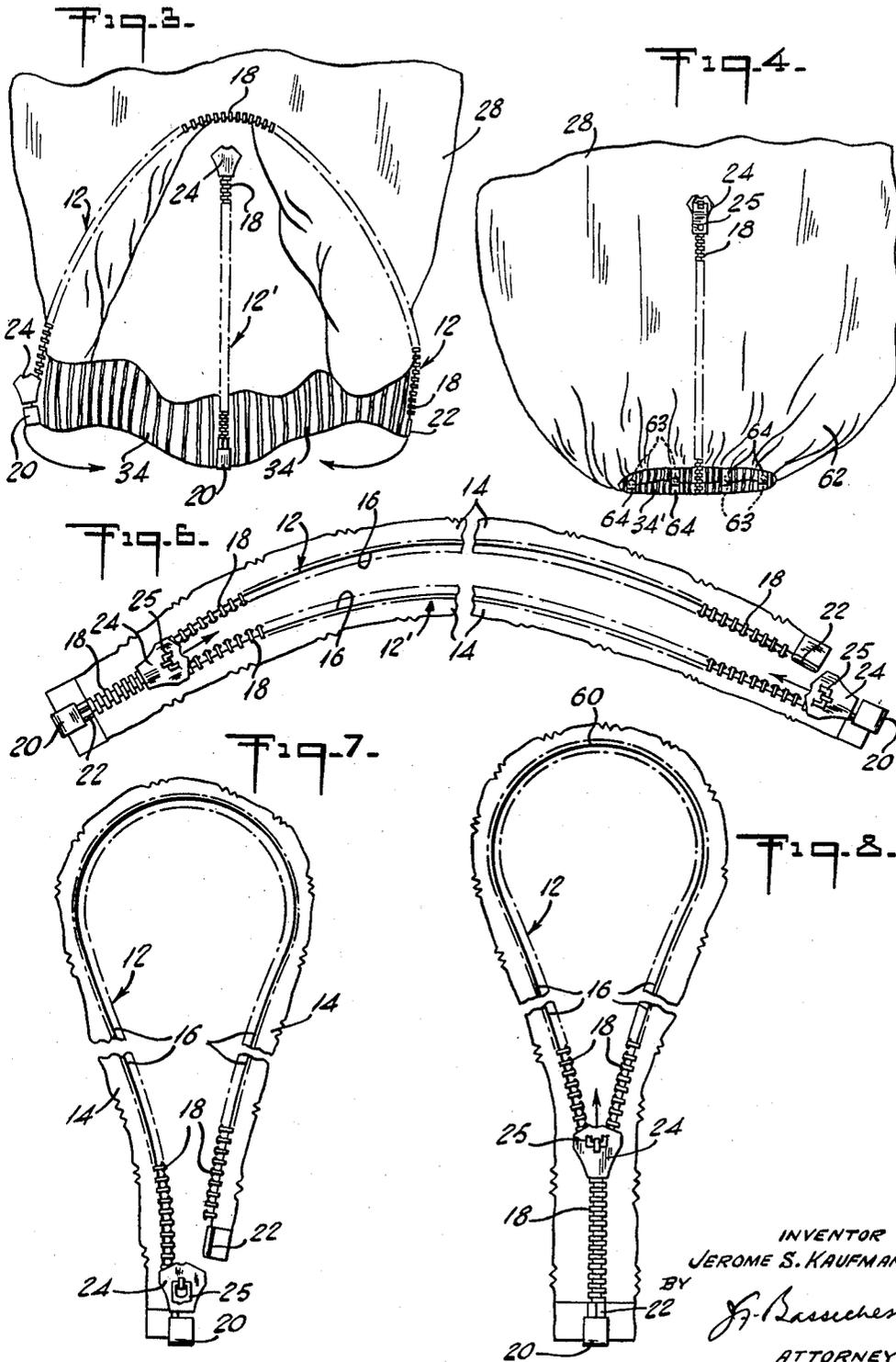
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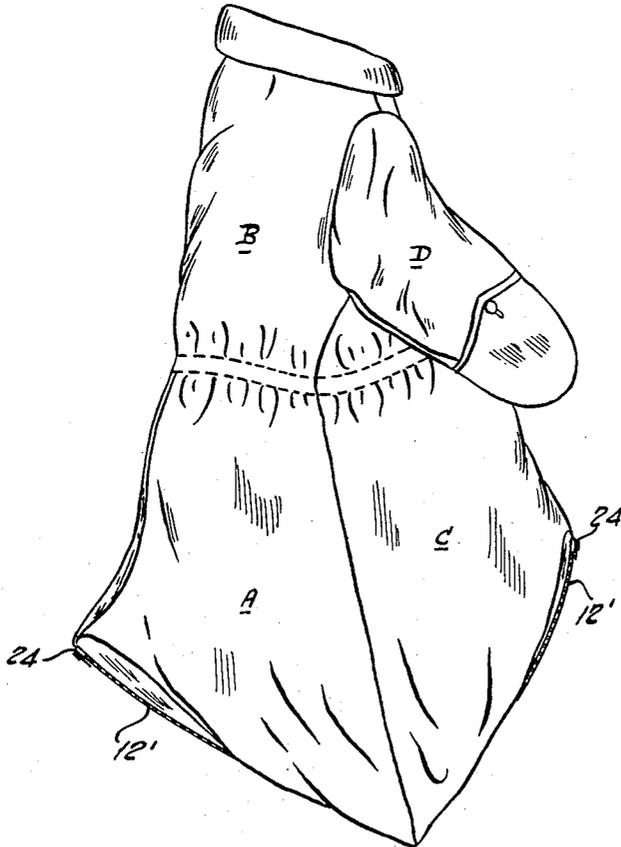
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Fig. 9.



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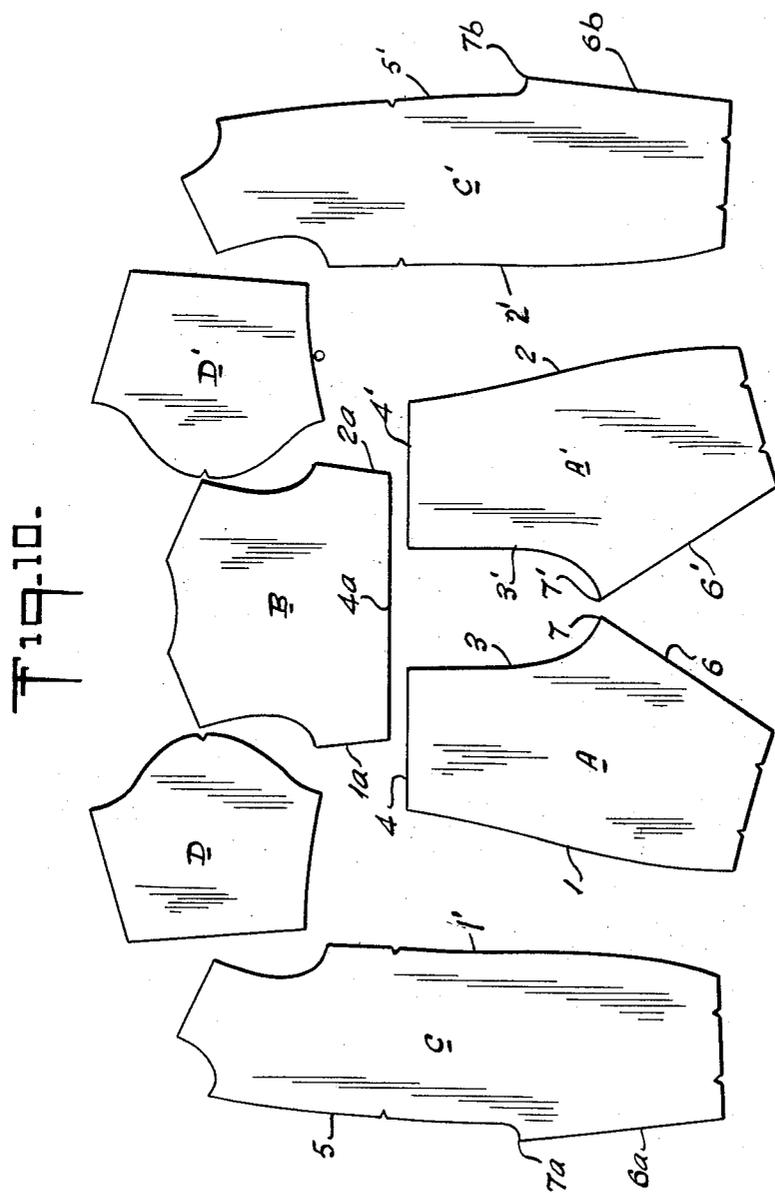
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2,915,758

CONVERTIBLE GARMENT

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Application March 14, 1958, Serial No. 721,525

2 Claims. (Cl. 2—69.5)

This invention relates to a combination garment for infants and toddlers, and more particularly to a combination garment convertible from an infant's sack or bunting to a toddler's snowsuit having leg portions.

Known to me is the provision of an infant's snowsuit or sack comprising a full length body covering portion having sleeves and a bottom sack portion of the general type exemplified in the patent to Astrove No. 1,919,154 of July 18, 1933, particularly including a closure running from adjacent the neck portion to the terminal portion of a sack whereby, by running a zipper closure from the neck portion to the bottom, ready access to the infant is afforded.

Such garments are cut from fabric patterns in which the panels constituting the front section and the panel or panels constituting the rear section are joined to each other at their contiguous sides, utilizing the convexly formed side edges for the front panels and rear panels which allow for fullness below the waistline, without any undue bulk above the waistline.

Known to me also is the construction of toddlers' garments in which the body portion terminates in leg portions by the provision of front panels and rear panels having side seams and in which the leg portions are formed by rear panels and front panels joined along vertical side seams and crotch extending seams. Such leg forming garments are most frequently made from patterns defining the front panels and the rear panels by edges which have a segment centrally located with respect to the crotch concavely formed, and an edge extending medially to the vertical seam in the crotch.

Such a full garment which includes ready accessibility by the provision of side seams and substantially full length zipper closures, is exemplified by the Astrove Patent No. 2,520,300 of August 29, 1950.

Fullness necessary for enveloping the infant below the waistline in the sack forming garment and in the toddler's legged garment is, therefore, achieved by patterns known to me which are cut along opposed seam lines—that is, fullness for the sack being effected by enlarging the pattern along the side seams; fullness and crotch rise for the legged garment being effected along the crotch seam.

The junction of the patterns for the panels of such garments, forming the seams for fullness of the garment below the waistline, follows such an irregular outline that separable fasteners for joining these segments have usually or most often been confined to a kind which requires specially tailored flies, leaving gaping openings and adding unexpected expense in labor and material in forming the closure, and therefore has not made possible the substitution of ordinary zippers wherever rapid operation by separable fasteners is desired.

I have found that substantial economies may be effected in utilizing one set of patterns for the construction of a garment which is convertible from the sack or bunting form to the legged snowsuit form, and vice versa, by joining the edges constituting the vertical crotch edge of the left and right front panels and the vertical crotch

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edge of the left and right rear panels to each other by a continuous stringer having a high degree of flexibility linearly as well as transversely, whereby the stringer which joins the front left panel to the front right panel and the stringer which joins the rear left panel to the rear right panel along the crotch edge extends the waistline fullness to the rump portion of the garment without restraint on the slider operation, thereby making possible the use of one set of patterns and sewing techniques to fabricate both the legged snowsuit construction and the sack or bunting construction, with complete freedom and comfort to the wearer of the garment in either form.

Accordingly, it is an object of my invention to provide an infant's garment which has the utility of a full body covering, sack or bunting, and which is convertible to a body covering snowsuit of legged construction, and vice versa, using the patterns devised by me with such latter garments for convertibility to the former, with the fullness-below-the-waist requirements of the former, without special costly tailoring operations, by employing the crotch seams of the legged garment as an edge to edge juncture, and joining with the garment terminals defining the crotch seam, separable fasteners of the zipper type which offer no restraint in operation from interlocked to unlocked position in following the linear outline along a variety of surface configurations; more particularly, by the combination with the juncture of the crotch seam of a separable fastener assembly in the form of slide fasteners which permits flexibility in any direction to a considerable degree, without unmeshing the fastener elements, and which permits the stringers and fasteners to be curved sharply on themselves in the same plane, as where folded or doubled on themselves, so that when portions thereof lie in parallel planes, unmeshing is effectively prevented.

Still more particularly, the invention resides in the combination with the juncture for forming the crotch seam of the garment as described, of a separable slide fastener assembly having fastener elements which are interchangeably engageable for preventing transverse, lateral and flexural disengagement, without sacrificing flexibility of operation by any one of two intermeshing sliders moving from one terminus to the other, so that the same length of fastener elements may be curved sharply on itself, to intercouple flexibly in one plane or in a transverse plane, with another slide fastener assembly, whereby a high degree of convertibility from a bunting to a legged garment, and vice versa, may be effected with the patterns of a legged garment, to secure the requisite fullness for a sack or bunting.

In its more specific embodiment, my invention has for its object the achievement of an infant's garment convertible from a full length body covering sack or bunting to a legged snowsuit, and vice versa, by the employment of a garment pattern devised by me for the production of a snowsuit, in which operation for either purpose is assured smoothly and with great flexibility, by joining the juncture portion of the garment normally outlining the crotch seam of the snowsuit with double acting symmetrical type scoops in which alternately directed sliders may act as closures for meshing and unmeshing a pair of stringers for forming one closure, or for folding each one of a pair of stringers of scoops on itself, to have one slide mesh and unmesh the scoops of one stringer with the other along the length of a single stringer, whereby two separate closures are formed.

In accordance with my invention, the interlocking separable fastener scoop elements of double acting or two-way symmetrical form found useful by me are those described and exemplified in the United States patent to William Mikulas, No. 2,622,295 of December 23, 1952, to which reference is made for a specific

illustration of the form of scoops by which the convertibility of the garment as described is achieved.

To attain these objects and such further objects as may appear herein or be hereinafter pointed out, I make reference to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a front elevational view of a garment embodying the present invention in the form of a closed leg snowsuit;

Figure 2 is a fragmentary perspective view illustrating one stage of the conversion;

Figure 3 is a fragmentary front view at a second stage of conversion;

Figure 4 is a view similar to Figure 3, with the bottom of the garment converted to the bunting or sack form;

Figure 5 is an exploded plan view of a stringer coupling for use in accordance with the present invention;

Figure 6 is a fragmentary plan view showing the slide fastener assembly partially converted, coupled to provide the legged form of the garment shown in Figure 1;

Figures 7 and 8 are magnified fragmentary plan views illustrating the steps of engaging the slide fastener stringer for achieving the position of the garment shown in Figure 4;

Figure 9 is a magnified end elevation of the garment flattened out and viewed from the right hand side;

Figure 10 illustrates the plan view of the principal blanks employed in making the garment, shown on a reduced scale.

The garment shown in Figure 1 illustrates a front elevation of a snowsuit made from fabric, suitably lined for warmth and cut from blanks, the principal components of which are shown in Figure 10, to constitute lower leg portions, A, A' for the rear right and rear left portions of the garment, a back panel B, a right front panel C and a left front panel C'. Edges 1 and 1' of the panels A and C are sewn together to form a right side seam. Edges 2 and 2' of the panels A' and C' are sewn together to provide the left side seam. Edges 3 and 3' are sewn together to form the rear longitudinal seam. Edges 4 and 4' are joined to the edge 4a to form the waistline seam. Edges 1a and 2a are joined to the upper portions of the panels C and C' along an extension of the edge 1' and 2'. Edges 5 and 5' may be joined by separable fasteners, as will be described as this description proceeds. The right sleeve D and the left sleeve D' are then set into the armholes, as will be readily understood.

Except for trimming of collar and cuffs, as will be described hereafter, this completes the garment, except that it leaves unattached what is normally the crotch seam defined by the crotch seam forming edges 6, 6', 6a and 6b to the lower side of the united corners 7, 7', 7a and 7b. Alternatively, it will be apparent that with the crotch seam joining edges 6, 6', 6a and 6b left ununited, the basic blanks thus described would optionally form leg portions by joining the crotch seam forming edges 6 and 6a, and 6' and 6b, or a sack may be formed by joining the crotch seam forming edges 6 and 6', 6a and 6b.

To effect the alternative joining, the crotch seam outlined by the edges 6, 6', 6a and 6b, I now make reference to Figures, 5, 6, 7 and 8 wherein there is shown a slide fastener assembly 10 which comprises a pair of identical slide fastener stringers 12 and 12'. Each stringer 12, 12' comprises a tape 14 having a beaded edge 16 which is provided with a series of spaced, interlockable fastener elements of the double acting or two-way scoop form, and more particularly, symmetrical scoops in accordance with the aforementioned Mikulas Patent No. 2,622,295. It will suffice to characterize the fastener elements or scoops in accordance with the said Mikulas patent to provide projecting and interlocking ridges on the cooperative faces of the scoops, furnishing engaging areas preventing lateral, transverse and flexural

disengagement while maintaining a high degree of flexibility between the interlocking elements.

Stringers 12, 12' are each provided with a fully separable end stop 20 at complementary opposed ends and a pin member 22 in the alternative opposite end positions so that mating of the end stop and pin may be effected by the stringers 12 and 12' from each opposite end or by doubling over the stringer on itself, as shown in Figures 7 and 8, the end stop 20 and the pin 22 on the same stringer may be mated. To operate the fasteners from either mating position, a slider may be used. A pair of sliders 24, with pulls 25, are mounted in position opposite stringers 12 and 13, respectively, before affixing the end stops and pins and are faced in opposite direction to each other, movement in the direction of the wings coupling or meshing the scoops to each other and, vice versa, unmeshing by movement of the slider in the direction away from the wings.

Any type of slider may be used which may be of the nonlocking or locking type. Where the slider is of the locking type, any of the well known locking types may be employed, such as an automatic lock, pin lock, cam lock or wing lock.

Affixation of the stringer 12 is made to the continuous edge defined by the edges 6a and 6b of the blanks C and C', the complementary stringer 12' being affixed to the continuous edge defined by the edges 6 and 6' of the blanks A and A'. The garment 26 exemplifies the application of the slide fastener assembly to the garment of the full length type, that is, one extending from the neck to the ankle, and comprises a body encircling portion 28 in which the panels C and C' constitute the front, and the sewn panels A, A' and B constitute the back. Leg portions 30 and 32 may terminate in knitted cuffs 34, to provide elasticity for hugging the ankles.

Adjacent the waistband, elastic may be inter-shirred to provide an elastic waistband 36. The edges 5 and 5' previously described outline the front 31 and may be separably closed by a slide fastener closure 38 from adjacent the crotch to the neck opening 40, to which neck portion a turnover collar may be provided.

The sleeves 44 may be made from the blanks D, D' previously described, and secured to the armholes 45. The sleeves may be provided with cuffs or mittens 46 which may be removably attached by means of a button 48 and buttonhole 50 on the sleeve and mitten, respectively. A collar tab and button 52 may augment the closure at the neckline in a manner readily understood.

The leg portions 30 and 32 are symmetrically arranged to provide a pair of free longitudinal edges 54 and 54' which correspond to the edges 6a, 6b, 6 and 6', previously described, each of which edges extends from the bottom edge 56 of one leg, along the knitted cuffs, across the crotch corresponding to the points 7, 7', 7a, 7b, and then to the bottom edge of the other leg across the elasticized cuff, the stringers 12, 12' and their corresponding tape and scoops being longitudinally co-extensive with the edges 54, 54' and are oppositely disposed along said edges so that each leg portion adjacent the bottom edge 56 is provided with one pin member 22 and an end stop assembly 23 for separably uniting the pin and the end stop and which will position the sliders 24 faced with the wings toward each other.

The garment is formed to join the edges 6 and 6a, and the edges 6' and 6b and therefore outline spaced tubular leg portions 30 and 32 by threading one or both of the pin members 22 through the wing end of the slider positioned near the stop 20 and then into the stop or socket 20.

One slider may thereby be moved from the left leg portion, across the crotch 58 to the opposite leg portion until it abuts the second slider, or vice versa, the slider from the right leg may be slid to bring the scoops into engagement by moving the slider from the right to the left. Either one of the sliders may be moved to

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mesh or unmesh the symmetrical fastener elements 18 from either starting direction of the slider movement. The sliders may both be moved toward the crotch portion 58 with equal facility, in which event unmeshing may be limited to the deepest portion of the crotch, while leaving the cuffs united to engage the leg of the infant.

To convert the garment to a sack or bunting, each slider is preferably moved to the limiting position adjacent the separable stops 20 and the pin 22 is removed from the stop. This will position one slider adjacent the stop 20 carried by the left leg portion and the other slider 20 adjacent the opposite stop, as more particularly shown in Figure 2. Thereupon, the stringer 12 is doubled upon itself, as shown in Figure 7, to permit threading of the pin 22 through the unoccupied wing of the slider 24 until the pin 22 is seated in the stop 20, thereby permitting the slider to be moved to the medial portion 60 adjacent the corner edges 7a and 7b. The same operation is performed by the stringer 12' joining the panels A and A' to join the edges corresponding to the crotch seam forming edges 6 and 6' up to a point corresponding to the points 7 and 7'. The joiner of the edges 6 and 6' is accompanied by a distension and fullness more particularly illustrated in Figure 9, thereby to define a sack or bunting 62 with a bottom formed by a band of the knitted cuffs 34. This portion may be closed by upturning and folding in the peripheral continuous knitted cuffs at 34' and, if desired, interengaging the same by snap fasteners 63 formed on tabs 64 arranged in complementary, mating relationship.

Thus it will be observed that the juncture of the panels A and A' by the folded stringer 12' provides fullness heretofore achieved only by patterns employed in making sacks or buntings.

Furthermore, it will be observed that locating the stringer 12' with double acting, symmetrical scoops as defined, offers no restraint in operation from the interlocked to the unlocked position, whether the seam line traversed is in the internal position in the leg forming condition illustrated in Figure 1, or in the external position illustrated in Figures 3, 4 and 9.

Such operations may be effected without endangering the meshing or unmeshing of the fasteners as achieved by the interlocking scoops which prevent lateral, transverse and flexural disengagement with a high degree of flexibility in turning the panels A, A' and their edges, and the panels C, C' and their edges from along the crotch line to an external position, convertibility from a legged garment to a full bunting or sack being effected with the single form of pattern.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is:

1. A single garment which is convertible into a bunting or a suit having leg portions comprising front left and right panels and a back covering portion having spaced left and right panels, each extending below the waistline forming portion, left and right panels being joined at their respective side edges, contiguous edge portions of each of said panels along the medial portion of the garment below the waistline outlining crotch seam edges of coterminous lengths, each of said crotch seam edges carrying affixed thereto one of a pair of continuous slide fastener stringers extending in a single length from the terminal front left crotch seam edge to the terminal front right crotch seam edge, the other of the pair of

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stringers extending in a single length from the terminal edge of the rear left crotch seam edge to the terminal edge of the rear right crotch seam edge, each of said stringers having double-acting interlockable symmetrical scoops and a carrying slider, the front left and rear left terminal edges having a mating separable pin and stop, and the front right and rear right terminal edges having a mating separable stop and pin, the mating stops and pins being located on alternatively opposite end portions so that in converting the garment into a bunting the stringers operate singly in doubled-over, loop form whereby the stop on the front right terminal edge mates with the pin on the front left terminal edge and the pin on the rear right terminal edge mates with the stop on the rear left terminal edge and the slider on the stringer closing the loop and, in converting the garment into a suit having leg portions the two lengths of stringers are arranged to be longitudinally coextensive whereby the stop on the front right terminal edge mates with the pin on the rear right terminal edge and the pin on the front left terminal edge mates with the stop on the rear left terminal edge thereby positioning each stringer to have the opposite terminal ends with a separable stop and pin in mating relation, and the sliders on said stringers operable in opposite direction, whereby either slider may mesh and unmesh the pair of stringers and form legged portions on the garment or open the same.

2. A single garment which is convertible into a bunting or a suit having leg portions comprising front left and right panels and a back covering portion having spaced left and right panels, each extending below the waistline forming portion, left and right panels being joined at their respective side edges, contiguous edge portions of each of said panels along the medial portion of the garment below the waistline outlining crotch seam edges of coterminous lengths, each of said crotch seam edges carrying affixed thereto one of a pair of continuous slide fastener stringers extending in a single length from the terminal front left crotch seam edge to the terminal front right crotch seam edge, the other of the pair of stringers extending in a single length from the terminal edge of the rear left crotch seam edge to the terminal edge of the rear right crotch seam edge, each of said stringers being provided with spaced interlockable fastener elements of the double-acting symmetrical type and having a slider and a fully separable end stop assembly at one end and a complementary pin member at the opposite end thereof, the mating stops and pins being located on alternatively opposite end portions so that in converting the garment into a bunting the stringers operate singly in doubled-over, loop form whereby the stop on a stringer mates with the pin on the same stringer and the slider on said stringer closes the loop, and in converting the garment into a suit having leg portions the two lengths of stringers are arranged to be longitudinally coextensive whereby the stop on each of the stringers mates with the pin on the other of the stringers and the sliders operable on the stringers in opposite directions mesh and unmesh the pair of stringers and form leg portions on the garment or open the same.

References Cited in the file of this patent

UNITED STATES PATENTS

| | | | |
|----|-----------|---------|----------------|
| 65 | 2,257,426 | Neiman | Sept. 30, 1941 |
| | 2,598,462 | Strauss | May 27, 1952 |
| | 2,622,248 | Schaye | Dec. 23, 1952 |
| | 2,738,512 | Winer | Mar. 20, 1956 |