Dec. 23, 1952 J. M. SCHAYE 2,622,248

FASTENER ASSEMBLY FOR GARMENTS

Filed Feb. 11, 1949 4 Sheets-Sheet 1

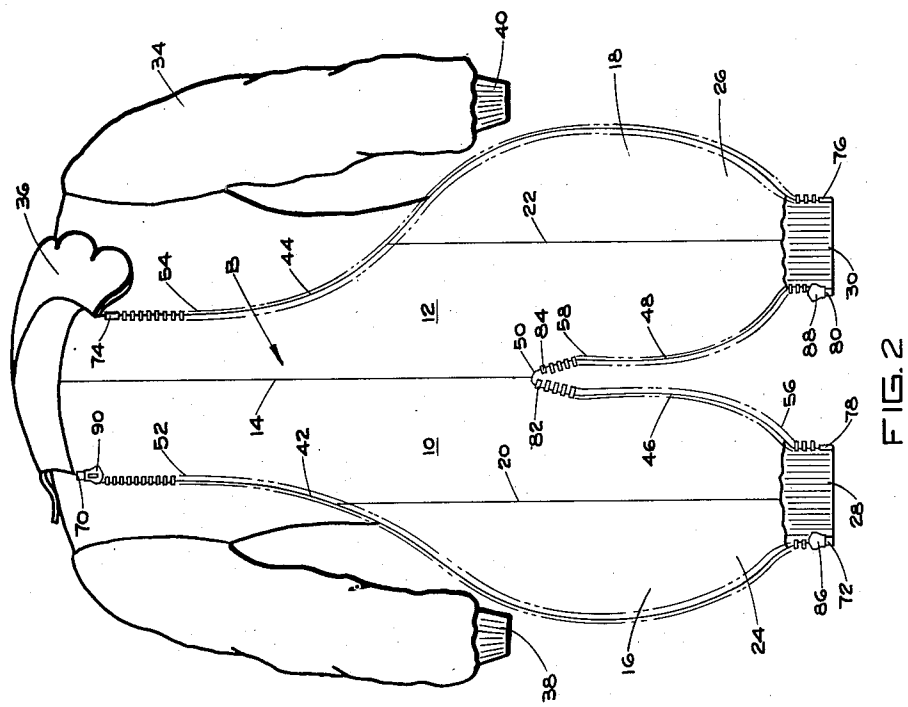

FIG. 2

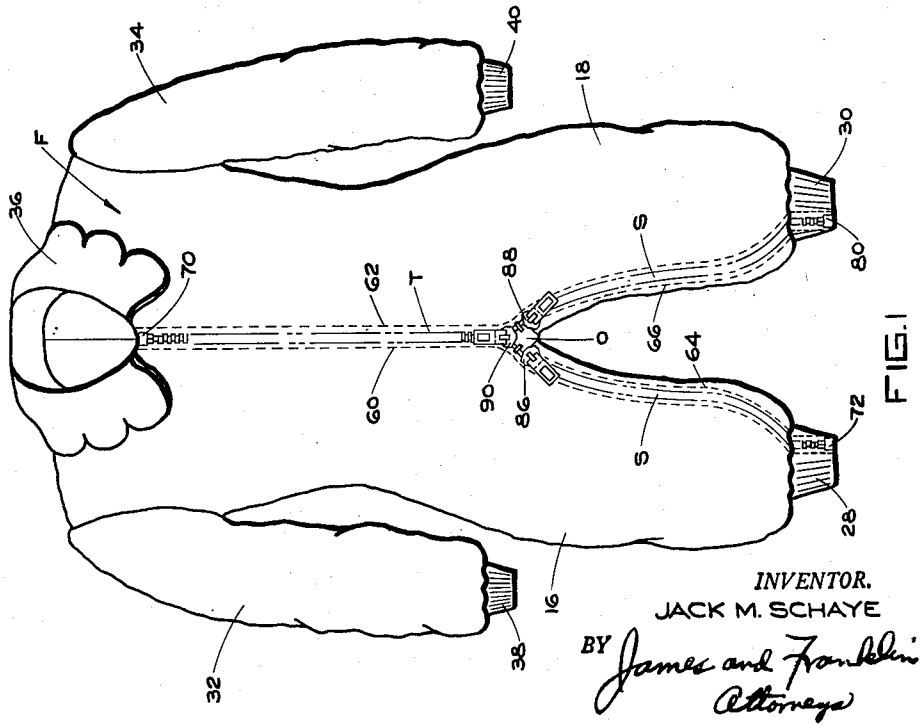

FIG. 1

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FASTENER ASSEMBLY FOR GARMENTS

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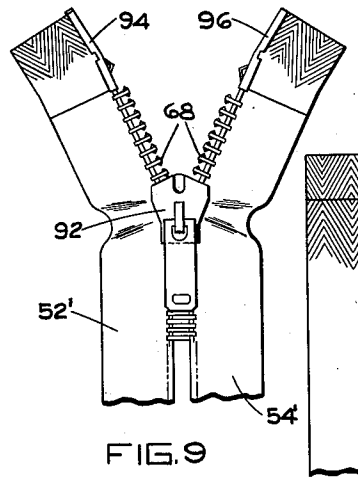

FIG. 9

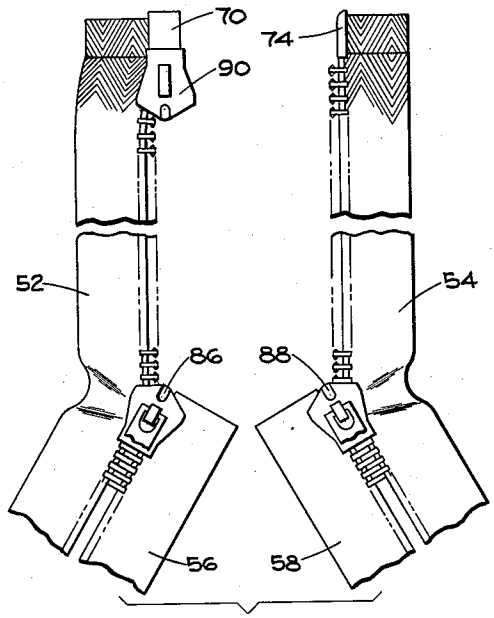

FIG. 5

FIG. 3

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FASTENER ASSEMBLY FOR GARMENTS

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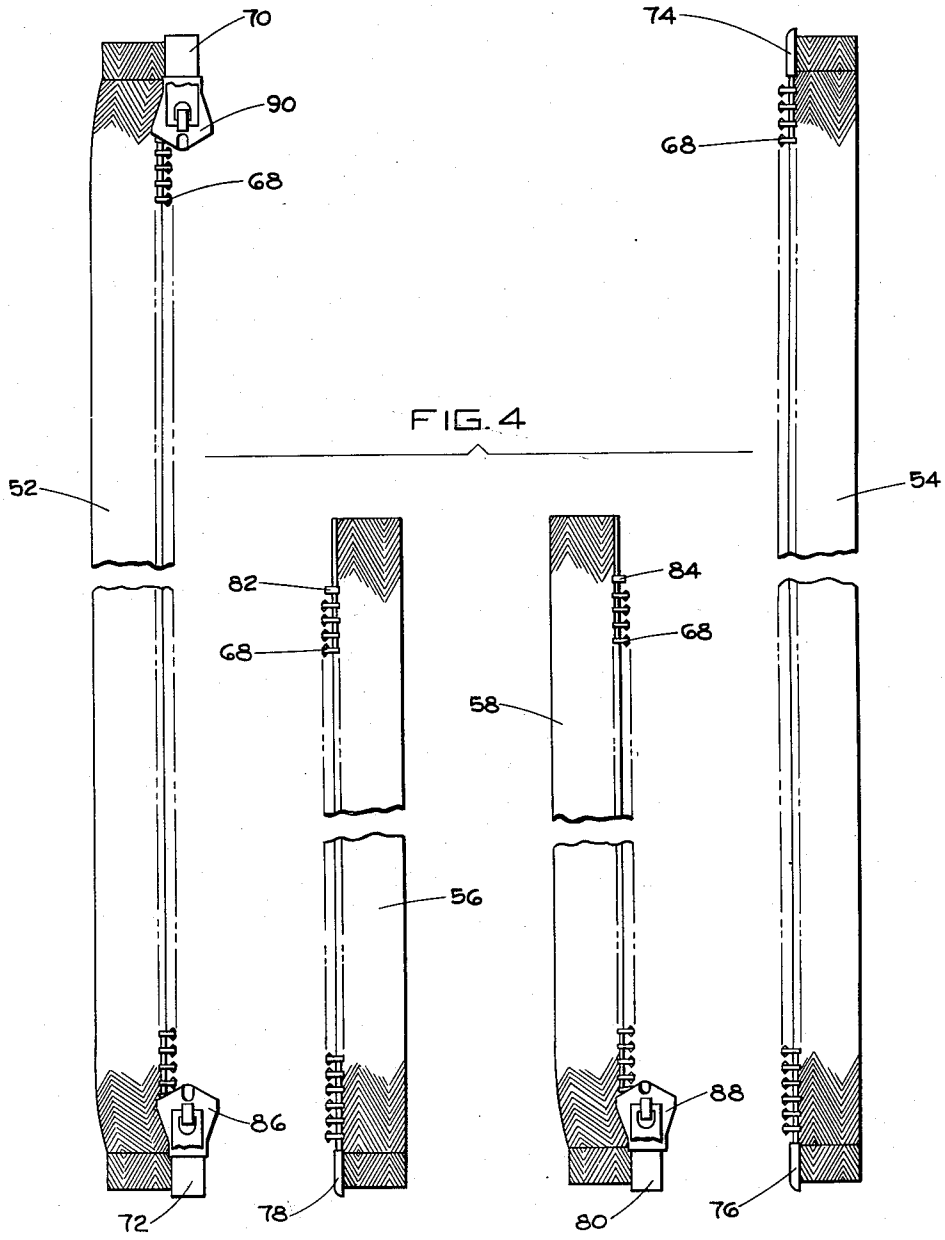

FIG. 4

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FASTENER ASSEMBLY FOR GARMENTS

Filed Feb. 11, 1949 4 Sheets-Sheet 4

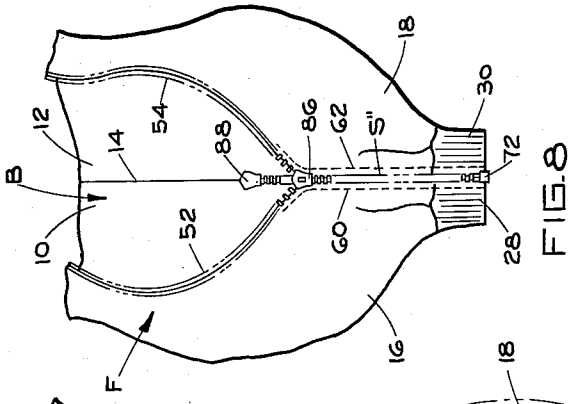

FIG. 8

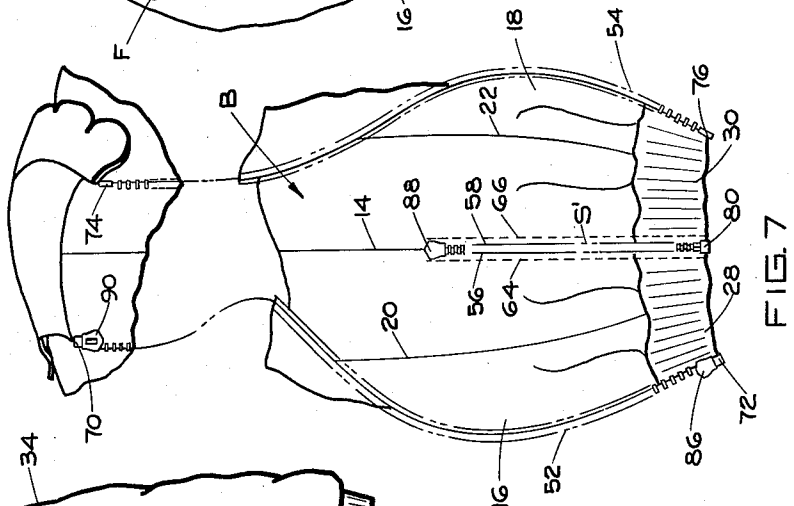

FIG. 7

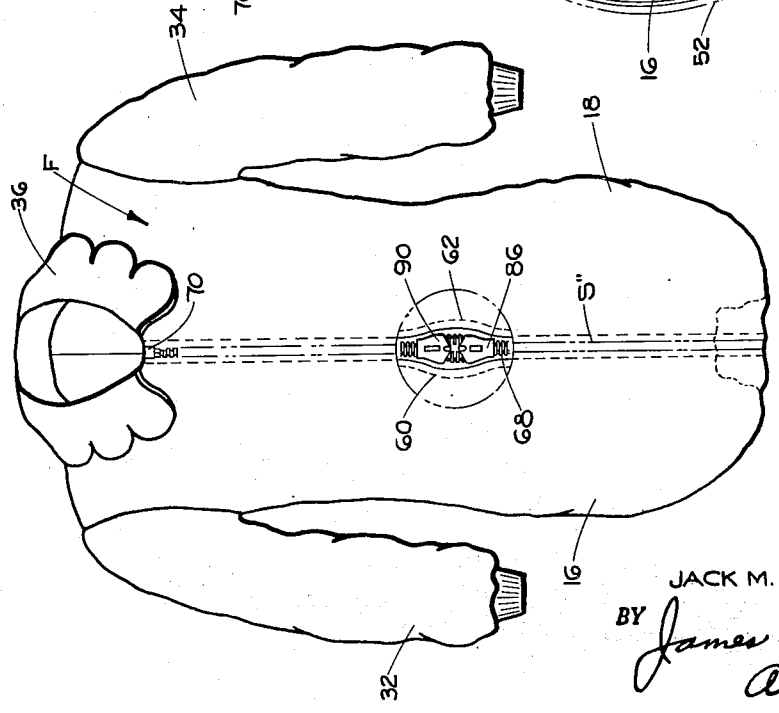

FIG. 6

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Patented Dec. 23, 1952 2,622,248

UNITED STATES PATENT OFFICE

2,622,248

FASTENER ASSEMBLY FOR GARMENTS

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Application February 11, 1949, Serial No. 75,939

27 Claims. (Cl. 2—80)

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This invention relates to a novel slide fastener assembly particularly suited for incorporation into a garment.

Great difficulty has been encountered in dressing a small child in a play suit, sometimes called a snow-suit. The parent's patience frequently is taxed in the endeavor to insert the child's legs in the leg portions of the garment. Often when leaving for home after a visit the child is asleep, and is awakened by the effort to put him in the garment.

By means of a new garment construction, the above mentioned difficulties are, for the most part, eliminated. The garment and slide fastener assembly are so designed that the child, if small or asleep, may literally be laid into the garment, or if the child is older, the garment may be wrapped about the child while standing. Furthermore, the garment may be removed from the wearer very quickly when the occasion demands. Also the lower portion may be opened widely, without opening the upper portion, for diapering or for toilet purposes.

Another feature of the garment is that it is readily converted into a sleeping bag or bunting. Thus the garment may be bought when a child is only an infant not yet walking. It is then used as a bag or bunting, the baby being laid in the bag while open, and the bag then being closed by means of my novel slide fastener assembly. The following winter when the child is walking, the garment is used as a snow suit. Here also the child may be laid into the garment, even while asleep, and the garment closed by means of my new slide fastener assembly.

The ease and simplicity with which the garment may be put on and taken off also makes the invention suitable for older children and for adult use. One adult use for which the fastener assembly is particularly adapted is on coveralls.

One primary object of my invention resides in the provision of a novel slide fastener assembly particularly adapted for use in the aforesaid garment construction. More specific objects are to provide a slide fastener assembly utilizing a minimum number of slide fastener components in the finished garment; to reduce the amount of processing, sewing and handling when incorporating the slide fastener assembly into the garment; to improve the appearance of the finished garment; and to improve the operation of the garment and the slide fastener assembly built into the same.

To accomplish the foregoing objects, and such other objects as may hereinafter appear, my invention resides in the slide fastener assembly and garment and their relation one to another as are more particularly described in the following specification. The specification is accompanied by drawings in which:

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Fig. 1 is a front view of a garment embodying my invention, and shown in closed condition;

Fig. 2 is a similar view illustrating the garment completely open and ready to receive the wearer;

Fig. 3 is a plan view of an inverted Y shaped assembly of slide fastener components used in the garment shown in Figs. 1 and 2;

Fig. 4 is a disassembled view of the components comprising the slide fastener assembly shown in Fig. 3, the components being oriented as in the garment;

Fig. 5 is a fragmentary, plan view illustrating a step in the assembly of the slide fastener components from the stage shown in Fig. 4 to the assembly shown in Fig. 3;

Fig. 6 is a front view of the garment when converted into a sleeping bag, the encircled parts being drawn to enlarged scale;

Fig. 7 is a fragmentary, front view illustrating a step in the procedure for converting the garment into the sleeping bag shown in Fig. 6;

Fig. 8 is a fragmentary, front view showing another step in converting the garment into a sleeping bag; and

Fig. 9 is a fragmentary, plan view of another form of separable coupling means which may be employed in the invention.

Referring to the drawing, and more particularly to Fig. 3 thereof, the novel slide fastener assembly of my invention comprises two long stringers 52 and 54, two short stringers 56 and 58, and three sliders 86, 88 and 90 arranged in inverted Y formation. The short stringer 56 is joined to the long stringer 52 by means of the slider 86, and the other short stringer 58 is joined to the other long stringer 54 by means of the slider 88, thus forming the arms of the Y. The upper or excess portions of the long stringers 52 and 54 are joined to each other by the third slider 90 to form the stem of the Y.

The slide fasteners are of the fully separable type. More specifically, the assembly preferably includes three fully separable end stops or bottom stops 70, 72 and 80 disposed at the three ends of the Y. The interlockable elements on the stringers (marked 68 in Fig. 4) are of the double acting type, that is, they are of the type which permits a slider to mesh or unmesh them in either direction of slider movement. The sliders are mounted on the stringers with the

large or neck ends of the sliders disposed toward one another.

This slide fastener assembly is particularly adapted for use in a legged garment such as a snow suit, for example that shown in Fig. 1 of the drawing. The garment comprises the usual body encircling portion and leg portions extending therefrom. The garment is slit from the lower end of each leg portion upwardly to the crotch, as indicated at S, and from the top edge of the garment downwardly to the crotch, as indicated at T, the said three slits meeting in a common point O which is open so that the garment may be spread widely open as shown in Fig. 2 to receive the wearer. Indeed, with an infant or small child the garment is usually spread flat on a bed or table and the child is laid in the open garment before attempting to close the same.

Apart from the convenience in dressing or undressing, the garment has another advantage in that it may be used also as a sleeping bag or bunting. For this purpose the mating portions of the fully separable end stops at the lower ends of the leg portions of the garment are relatively disposed in a manner such as that shown at the bottom of Fig. 2. Not only may the front and rear edges of each leg portion be joined when the garment is to be used as a garment, as shown in Fig. 1, but also the rear edges of the two leg portions, that is, the short stringers, may be joined as shown at S' in Fig. 7, and the front edges of the two leg portions, that is, the long stringers, may be joined as shown at S'' in Figs. 6 and 8, thus converting the two lower leg portions of the garment into a single large bag.

Considering the matter in greater detail, the garment comprises a front F and a back B. The back B may be made from sections 10 and 12 joined to each other by the central sewn seam 14. A pair of front sections, 16 and 18, are joined to the back B by sewn seams 20 and 22. The patterns for the front and back sections are so cut that when joined, leg portions 24 and 26 extend from the body portion of the garment. If desired, the back of the garment may be made from a single pattern piece instead of two sections. Also, if desired, separate leg portions may be sewn to a front and back cut to encircle the upper body or trunk. Preferably, the leg portions 24 and 26 are provided at their extremities with anklet portions 28 and 30, respectively, which may be sewn thereto. The anklets are formed of knitted material to provide elasticity at these areas. A pair of sleeves 32 and 34 are sewn into the armholes and a collar 36 is provided at the neck of the garment. Preferably, the sleeves 32 and 34 also are provided at their extremities with knitted wrist or cuff portions 38 and 40 to provide elasticity at these areas.

The garment has edges 42 and 44 each of which extend down the front of the garment from the neck or collar 36 to the lower extremity of each anklet on the leg portions 24 and 26. The other pair of longitudinal edges of the garment, 46 and 48, extend along the leg portions 24 and 26 from the crotch 50 to the lower extremity of its respective leg portion. The edges 42 and 44 are of substantially equal length as are the edges 46 and 48. The edges 42 and 44, however, are longer than the edges 46 and 48 by an amount substantially equal to the length of the upper body or trunk encircling portion of the garment. When the garment is spread open the edges 42 and 44 are on the outside, while the edges 46 and 48 are intermediate the edges 42, 44.

The long edges 42 and 44 have attached thereto throughout their entire lengths, a pair of slide fastener stringers 52 and 54, respectively. The comparatively short leg edges 46 and 48 have attached thereto a pair of slide fastener stringers 56 and 58, respectively. Preferably, the tapes of the stringers 52, 54, and 56, 58 all match and are secured to the edges of the garment by sewing indicated at 60, 62, 64 and 66, respectively.

The slide fastener assembly shown in Fig. 3 is itself an article of commerce which is produced by the slide fastener manufacturer and shipped to the garment manufacturer for incorporation in the garment. The separate components prior to assembly by the slide fastener manufacturer, and as the garment manufacturer may, if desired, disassemble them during incorporation into the garment, is illustrated in Fig. 4. The stringers 52, 54, 56 and 58 are each formed with a series of spaced, interlockable fastener elements 68 clamped onto the beaded edge of the stringer tape in accordance with conventional practice. The beaded edge of the tape may be formed in any well-known manner, as by sewing cords to each side of the tape edge, or by providing a tape having a corded or beaded edge formed by weaving. The interlockable fastener elements are of the so-called "double-acting" type, which permit meshing or unmeshing in either direction of movement of a slider. This type of slide fastener element may be of the symmetrical or the asymmetrical type, and is well-known in the art. Symmetrical elements are shown in the drawing.

In a sense, the stringers 52 and 54 constitute two halves of a fully separable fastener, but it differs from the conventional construction in that a slider and a fully separable end stop assembly are provided at each end of the fastener. The fastener is symmetrical end to end. It has two bottom ends and no top end. Any suitable means or so-called "separable bottom stop" may be provided for separably coupling the stringers at the ends. As here illustrated, the separable coupling means may be made in accordance with the disclosure set forth in detail in the patent to Ulrich, 2,216,794, issued October 8, 1940. The stringer 52, which may be termed the slider retaining stringer, is provided with socket members 70 and 72 at the ends thereof. The stringer 54, which may be termed the slider releasing stringer, is provided at its ends with pins 74 and 76.

The pair of short stringers 56 and 58 may constitute two halves of a fully separable fastener. The slider releasing stringer 56 is provided at its lower end with a pin 78, and the slider retaining stringer 58 is provided at its lower end with a socket member 80. At the upper ends of stringers 56 and 58, slider top stops 82 and 84, respectively, may be attached to the tapes. It is not essential that slider stops be attached to the tapes of the stringers 56 and 58. Suitably located stop means may be provided on the stringers 52 and 54 which do not hinder the passage of a slider except when an opposing fastener element on the other stringer engages the stop within the slider. Such stop means is disclosed in the patent to Perrault, 1,571,095, issued January 26, 1926. If desired, stop means may be eliminated entirely, and reliance may be placed upon the presence of garment material in the crotch to limit the movement of the sliders.

While the separable coupling means for the two pairs of stringers are illustrated as being of the socket and pin type of construction, it shall be understood that it is within the scope of the

invention to use any desirable separable coupling means.

One particularly advantageous separable coupling which may be employed is that disclosed in a pending application of Albert Bashover, Serial No. 59,330, filed November 10, 1948, and entitled "Fully Separable Slide Fastener." The separable coupling there described, and generally shown herein in Fig. 9, comprises an extra slider 92 and two long pins 94 and 96, one of which, 94, retains the slider. The other side of the slider 92 acts as a socket to receive the other pin 96. The long stringers may be otherwise the same and are designated 52' and 54', and are provided with three more sliders corresponding to sliders 86, 88, and 90 in Fig. 3. With such an arrangement the garment may be opened downwardly from the neck by simply moving the socket portion or extra slider 92 downwardly. As is described later, even without the Bashover coupling means, the neck area can be partially opened when the present garment is used as a sleeping bag, but that cannot be done when the garment is being worn as a legged garment. However, by using the aforesaid Bashover separable coupling means at the top the garment may be opened part way down from the neck even when wearing the garment as a regular legged garment.

Referring to the specific embodiment of disassembled stringers illustrated in Fig. 4, the slide fastener assembly is made by coupling the short stringer 56 to a corresponding length of the long stringer 52 by inserting the pin 78 into the socket 72 through a slider 86 disposed adjacent the socket 72. The slider 86 is then moved upwardly until it is brought to a halt by the presence of the stop 82. Likewise, the short stringer 58 is engaged with a corresponding length of the long stringer 54 by inserting the pin 76 into the socket 80 through a slider 88 disposed adjacent the socket. The slider 88 is then moved upwardly until it is brought to a halt by the stop 84. The assembly thus far described is shown in Fig. 5. Finally, the pin 74 on the stringer 54 is threaded through a slider 90 and into the socket 70 on the stringer 52 whereupon movement of the slider 90 away from the socket couples the stringers 52 and 54 together as shown in Fig. 3. The movement of the slider 90 is halted when it encounters the diverging portions of the stringers 52, 54 where the sliders 86, 88 are located. If desired, however, the stringers 52 and 54 may be coupled together prior to coupling the stringers 56 and 58 to the corresponding lower portions of the long stringers, 52 and 54. To disassemble, the converse procedure is followed.

It will be evident that the described procedure for assembling the components of the slide fastener assembly by the slide fastener manufacturer is much the same as the procedure which is followed to envelop a person in the garment. With the garment open, as shown in Fig. 2, it only is necessary for an individual to insert the arms into the sleeves 32 and 34, and to then follow the sequence of steps described to entirely close the garment. It will be observed that in the garment the four stringers are so arranged that the slider retaining stringer 52 (Fig. 2) is attached to the same leg portion 24 as the slider releasing stringer 56. The slider releasing stringer 54 is attached to the same leg portion 26 as the slider retaining stringer 58.

The sliders 86, 88 and 90 are, of course, provided with the usual handles or "pulls." The pulls may be of any desired configuration or construction. If desired, tape pulls may be used instead of metal, or metal chain pulls may be used instead of rigid metal. While the pull has been omitted in some parts of the drawing, the omission is solely for the purpose of clarity in illustration.

Any type of slider may be used, whether the non-locking or locking type. The locking type of slider may be any of the known kinds, such as an automatic lock, pin lock, cam lock or wing lock.

An automatic lock is one which locks automatically when not being moved by means of the pull, examples being the locks shown in U. S. patents to Berg 2,289,955 and Mikulas et al. 2,360,437. A pin lock is a lock in which the pull carries a pin adapted to engage between elements when the pull is turned down to flat position, such locks being shown in U. S. patents to Whitney 1,598,183 and Ulrich 2,293,448.

One type of cam lock is a lock in which the pull carries a cam adapted to pass through a window in the slider to engage the fastener elements when the pull is turned down to flat position.

A wing lock slider is a slider so shaped at its wide end as to become locked against movement when the stringers are separated or subjected to cross-pull, such locks being shown in U. S. patents to Ulrich 1,723,496 and 2,279,767.

The three sliders may be used in any desired combination of locking or unlocking types or they may be all alike, that is, locking or unlocking. It is preferred that each of the sliders 86, 88 and 90 be of the automatic locking type. This preference is not critical, however, and is not intended to be in limitation of the invention.

The one-piece garment illustrated in Figs. 1 and 2 may be easily and quickly converted into a sleeping bag or bunting, as shown in Fig. 6. With the garment in open condition, as shown in Fig. 2, the pin 78 is threaded through the slider 88 and into the socket 80. The slider 88 is moved upwardly until halted by the stops 82, 84. As shown in Fig. 7, this operation results in a continuously closed back B from the top of the garment down to the lower extremity thereof. The pin 76 is then threaded through the slider 86 and into the socket 72. The slider 86 is then moved upwardly to mesh the slide fastener elements on the stringers 52 and 54, as shown in Fig. 8. Finally, the pin 74 is threaded through the slider 90 and into the socket 70 whereupon by moving the slider 90 downwardly until it meets the slider 86, as shown in Fig. 6, the entire front of the garment is closed. The pair of sliders may be located higher or lower on the bag, as desired. They may be spread apart at the center if it be desired to insert one's hand to adjust a part of the inner clothing of a child in the bag. If desired the lower slider 86 may be run all the way up to the top of the bag, without using the upper slider 90 or the separable coupling 70, 74. In such case the bag may be left partly open at the top or neck, it being closed or opened somewhat by a parent for a child according to changes in temperature condition, as when going from a house to an automobile. Conversely, the top slider may be run all the way to the bottom, if desired, without bothering to use the bottom stop and slider.

It will be observed that the sliders 86 and 90 are disposed in opposite directions; that is to say, the necks of the sliders face each other. Movement of either slider toward the other serves to

mesh the fastener elements, thus closing the fastener from either end. This is made possible by the double acting nature of the scoops 68 on the stringers.

When the garment is converted into a sleeping bag or bunting, the elastic bands 28 and 30 no longer serve as anklets. Instead, the elastic material gathers together and substantially closes the opening which would otherwise exist at the bottom of the bag. The material is preferably tucked or pushed inward, as suggested in broken lines at the bottom of Fig. 6.

While the garment has been described as particularly suited for children's wear, it is, of course, within the scope of the invention to produce garments for adult wear, for example, coveralls. The only difference is in the size and shape of the pattern pieces. The operation is essentially the same. The slide fastener assembly is the same as described, except that the length of the slide fastener stringers is increased.

It is believed that the construction and method of use of my improved slide fastener assembly, as well as the advantages thereof, will be apparent from the foregoing description. The assembly minimizes the number of slide fastener components required. It reduces the labor and expense required to sew the fasteners into a garment. Compared to the use of three separate slide fasteners, there is also an improvement in appearance; a reduction in the amount of metal at the crotch when the garment is closed; and elimination of any opening at the crotch, for the upper slider may be moved down all the way into contact with the lower sliders. When the garment is closed to form a sleeping bag or bunting there is greater flexibility in the operation of the sliders at the front of the bag. For quick closing the long stringers may be joined at the bottom, and the lower slider may be run all the way up to the top of the bag without bothering to use the pin, socket, and slider at the top. In addition to saving trouble and time, this has the added advantage that the bag may be partially opened from the neck down, if desired. If both front sliders are employed they may be located anywhere between the top and the bottom of the bag, and may be separated at any desired point between the top and the bottom of the bag for access to the interior.

The advantages of the improved garment itself are evident, for it may be spread widely open and an infant or small child laid in the garment before closing the same. It may be used as either a legged garment or as a sleeping bag or bunting. An older child can put on the garment while standing, but without necessitating balancing on one foot while placing the other through a garment leg. There is no need to pass wet shoes or overshoes through a garment leg, and instead the open garment is simply wrapped about the leg over the shoe top. The slide fasteners of the leg portions may be opened for diapering or for toilet purposes, without opening the upper portion of the garment.

It will be apparent that while I have shown and described my invention in several preferred forms, changes may be made in the structures shown, without departing from the spirit of the invention, as sought to be defined in the following claims.

I claim:

1. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length substantially shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a plurality of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers and the remaining lengths of the long stringers with each other, and a fully separable end stop assembly at the free ends of the long stringers for separably coupling the long stringers to each other.

2. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length substantially shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders each interengaging the fastener elements of one of the short stringers with the fastener elements of a corresponding length of one of the long stringers, a third slider positioned to face toward the pair of sliders for interengaging the remaining lengths of the long stringers with each other, and a fully separable end stop assembly at the free ends of the long stringers for separably coupling the long stringers to each other.

3. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders, each interengaging the fastener elements of one of the short stringers with the fastener elements of a corresponding length of one of the long stringers, a third slider for interengaging the remaining lengths of the long stringers with each other, and means for separably coupling the short stringers to the long stringers and the long stringers to each other.

4. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, a third slider for interengaging the remaining lengths of the long stringers with each other, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, and a third fully separable end stop assembly for separably coupling the long stringers to each other.

5. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, said stringers being provided with spaced

interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, a third slider for interengaging the remaining lengths of the long stringers with each other, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, a third fully separable end stop assembly for separably coupling the long stringers to each other, and means for limiting the movement of each of said pair of sliders along a short and long stringer.

6. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, a third slider positioned to face toward the pair of sliders for interengaging the remaining lengths of the long stringers with each other, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, a third fully separable end stop assembly for separably coupling the ends of the long stringers to each other, and a stop attached to each of the short stringers to limit the movement of each of said pair of sliders.

7. A slide fastener assembly comprising a pair of fully separable slide fastener stringers of substantially equal length, a second pair of fully separable slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, each pair of stringers providing a slider releasing stringer and a slider retaining stringer, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, one of said sliders being retained on the slider retaining stringer of the long pair and the other on the slider retaining stringer of the short pair when the stringers are fully separated, a third slider for interengaging the remaining lengths of the long stringers with each other, said third slider also being retained upon the slider retaining stringer of the long pair but disposed in an opposite direction with respect to the other slider retained thereon, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, and a third fully separable end stop assembly for separably coupling the long stringers to each other.

8. A slide fastener assembly comprising a pair of fully separable slide fastener stringers of substantially equal length, a second pair of fully separable slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, each pair of stringers providing a slider releasing stringer and a slider retaining stringer, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for enterengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, one of said sliders being retained on the slider retaining stringer of the long pair and the other on the slider retaining stringer of the short pair when the stringers are fully separated, a third slider for interengaging the remaining lengths of the long stringers with each other, said third slider also being retained upon the slider retaining stringer of the long pair but disposed in an opposite direction with respect to the other slider retained thereon, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, a third fully separable end stop assembly for separably coupling the long stringers to each other, and a stop attached to each of the short stringers to limit the movement of each of said pair of sliders along the corresponding portion of long stringer.

9. A slide fastener assembly comprising, in combination, two long stringers, two short stringers, and three sliders arranged in Y formation, with a short stringer joined to a long stringer by one slider, the other short stringer joined to the other long stringer by a second slider to form the arms of the Y, and the excess length of the long stringers being joined to each other by the third slider to form the stem of the Y, the interlockable elements on said stringers being of the type permitting a slider to mesh or unmesh them in either direction of slider movement, said sliders being mounted on said stringers with the large or neck ends of the sliders disposed toward one another, and a fully separable end stop assembly at the free ends of the long stringers for separably coupling the long stringers to each other.

10. A slide fastener assembly comprising, in combination, two long stringers, two short stringers, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, three sliders, and three fully separable bottom stops arranged in Y formation, with a short stringer joined to a long stringer by one bottom stop and slider, the other short stringer joined to the other long stringer by a second bottom stop and slider to form the arms of the Y, and the excess length of the long stringers being joined to each other by the third bottom stop and slider to form the stem of the Y.

11. A slide fastener assembly comprising, in combination, two long stringers, two short stringers, three sliders, and three fully separable bottom stops arranged in Y formation, with a short stringer joined to a long stringer by one bottom stop and slider, the other short stringer joined to the other long stringer by a second bottom stop and slider to form the arms of the Y, and the excess length of the long stringers being joined to each other by the third bottom stop and slider to form the stem of the Y, the interlockable elements on said stringers being of the type permitting a slider to mesh or unmesh them in either direction of slider movement, and said sliders being mounted on said stringers with the large or neck ends of the sliders disposed toward one another.

12. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide

two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a plurality of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers and the remaining lengths of the first pair of stringers with each other, and a fully separable end stop assembly at the upper ends of the first pair of stringers at the neck of the garment.

13. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, and a fully separable end stop assembly at the upper ends of the first pair of stringers at the neck of the garment.

14. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, and means for separably coupling the second pair of stringers to the first pair of stringers and the first pair of stringers to each other.

15. The garment defined in claim 14 wherein the sliders are of the automatic locking type.

16. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, a pair of fully separable end stop assemblies for separably coupling the second pair of stringers to the first pair, and a third fully separable end stop assembly for separably coupling the first pair of stringers to each other.

17. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, a pair of fully separable end stop assemblies located at the extremities of the leg portions for separably coupling the second pair of stringers to the first pair, a third fully separable end stop assembly located at the neck for separably coupling the first pair of stringers to each other, and means for limiting the movement of each of said pair of sliders along the stringers receiving the same.

18. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair extending from the crotch to the lower extremity of the other side of each leg portion, a pair of fully separable slide fastener stringers of substantially equal length attached to the first pair of edges, a second pair of fully separable slide fastener stringers attached to the second pair of edges,

said stringers each having a length substantially equal to the length of the edge to which it is attached, each pair of stringers providing a slider releasing stringer and a slider retaining stringer, the second pair of stringers being arranged so that its slider releasing stringer is attached to the same leg portion as the slider retaining stringer of the first pair of stringers and vice versa on the other leg portion, said stringers being provided with spaced interlockable fastener elements of the type permitting the slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers to the fastener elements of a corresponding length of the first pair of stringers, one of said sliders being retained on the slider retaining stringer of the first pair and the other on the slider retaining stringer of the second pair when the garment is opened, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, said third slider also being retained upon the slider retaining stringer of the first pair of stringers but disposed in an opposite direction with respect to the other slider retained thereon, a pair of fully separable end stop assemblies located at the extremities of the leg portions for separably coupling the second pair of stringers to the first pair, and a third fully separable end stop assembly located at the neck for separably coupling the first pair of stringers to each other.

19. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair extending from the crotch to the lower extremity of the other side of each leg portion, a pair of fully separable slide fastener stringers of substantially equal length attached to the first pair of edges, a second pair of fully separable slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, each pair of stringers providing a slider releasing stringer and a slider retaining stringer, the second pair of stringers being arranged so that its slider releasing stringer is attached to the same leg portion as the slider retaining stringer of the first pair of stringers and vice versa on the other leg portion, said stringers being provided with spaced, interlockable fastener elements of the type permitting the slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers to the fastener elements of a corresponding length of the first pair of stringers, one of said sliders being retained on the slider retaining stringer of the first pair and the other on the slider retaining stringer of the second pair when the garment is opened, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, said third slider also being retained upon the slider retaining stringer of the first pair of stringers but disposed in an opposite direction with respect to the other slider retained thereon, a pair of fully separable end stop assemblies located at the extremities of the leg portions for separably coupling the second pair of stringers to the first pair, a third fully separable end stop assembly located at the neck for separably coupling the first pair of stringers to each other, and a stop attached to each of the second pair of stringers in the crotch area to limit the movement of each of said pair of sliders.

20. A garment comprising a body encircling portion and leg portions extending therefrom, said garment being slit from the lower end of each leg portion upwardly to the crotch and from the top edge downwardly to the crotch, the said three slits meeting in a common point whereby the garment may be fully spread widely open to receive the wearer, and a slide fastener assembly to releasably close the slits, said assembly comprising two long stringers, one secured from the top of the garment to the lower end of a leg portion, the other from the top to the lower end of the other leg portion, two short stringers, one secured along each leg portion from the lower end thereof, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, and three sliders, one on each leg portion and one between the top and the crotch.

21. A garment comprising a body encircling portion and leg portions extending therefrom, said garment being slit from the lower end of each leg portion upwardly to the crotch and from the top edge downwardly to the crotch, the said three slits meeting in a common point whereby the garment may be fully spread widely open to receive the wearer, and a slide fastener assembly to releasably close the slits, said assembly comprising two long stringers, one secured from the top of the garment to the lower end of a leg portion, the other from the top to the lower end of the other leg portion, two short stringers, one secured along each leg portion from the lower end thereof, and three sliders, one on each leg portion and one between the top and the crotch, the interlockable elements on said stringers being of the type permitting a slider to mesh or unmesh them in either direction of slider movement, and said sliders being mounted on said stringers with the large or neck ends of the sliders disposed toward one another.

22. A garment convertible into a sleeping bag, said garment comprising a body encircling portion and leg portions extending therefrom, said garment being slit from the lower end of each leg portion upwardly to the crotch and from the top edge downwardly to the crotch, the said three slits meeting in a common point whereby the garment may be spread widely open to receive the wearer or sleeper, and a slide fastener assembly to releasably close the slits, said assembly comprising two long stringers, one secured from the top of the garment to the lower end of a leg portion, the other from the top to the bottom along the other leg portion from the lower end thereof, two short stringers, one secured along each leg portion, three sliders, one on each leg portion and one between the top and the crotch, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, and three fully separable end stops, the male and female portions or the mating portions of the fully separable end stops at the lower ends of the leg portions of the garment being so disposed relative to one another that the front and rear edges of each leg portion may be joined together when the garment is to be used as a garment, and the

rear edges of the two leg portions may be joined together and the front edges of the two leg portions may be joined together when the garment is to be used as a sleeping bag.

23. A garment convertible into a sleeping bag, said garment comprising a body encircling portion and leg portions extending therefrom, said garment being slit from the lower end of each leg portion upwardly to the crotch and from the top edge downwardly to the crotch, the said three slits meeting in a common point whereby the garment may be spread widely open to receive the wearer or sleeper, and a slide fastener assembly to releasably close the slits, said assembly comprising two long stringers, one secured from the top of the garment to the lower end of a leg portion, the other from the top to the bottom along the other leg portion from the lower end thereof, two short stringers, one secured along each leg portion, three sliders, one on each leg portion and one between the top and the crotch, and three fully separable end stops, the male and female portions or the mating portions of the fully separable end stops at the lower ends of the leg portions of the garment being so disposed relative to one another that the front and rear edges of each leg portion may be joined together when the garment is to be used as a garment, and the rear edges of the two leg portions may be joined together and the front edges of the two leg portions may be joined together when the garment is to be used as a sleeping bag, the interlockable elements on said stringers being of the type permitting a slider to mesh or unmesh them in either direction of slider movement, and said sliders being mounted on said stringers with the large or neck ends of the sliders disposed toward one another.

24. A slide fastener assembly comprising a pair of slide fastener stringers of substantially equal length, a second pair of slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, a third slider for interengaging the remaining lengths of the long stringers with each other, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, and a third fully separable end stop assembly for separably coupling the long stringers to each other, said third end stop assembly comprising two long pins and a fourth slider, one of said pins having means to retain the slider.

25. A slide fastener assembly comprising a pair of fully separable slide fastener stringers of substantially equal length, a second pair of fully separable slide fastener stringers of substantially equal length, said second pair of stringers having a length shorter than said first pair, each pair of stringers providing a slider releasing stringer and a slider retaining stringer, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the short stringers with the fastener elements of a corresponding length of the long stringers, one of said sliders being retained on the slider retaining stringer of the long pair and the other on the slider retaining stringer of the short pair when the stringers are fully separated, a third slider for interengaging the remaining lengths of the long stringers with each other, said third slider also being retained upon the slider retaining stringer of the long pair but disposed in an opposite direction with respect to the other slider retained thereon, a pair of fully separable end stop assemblies for separably coupling the short stringers to the long stringers, and a third fully separable end stop assembly for separably coupling the long stringers to each other, said third end stop assembly comprising two long pins and a fourth slider, one of said pins having means to retain the slider, said fourth slider being disposed in opposite direction to the third slider.

26. A one-piece garment comprising a body encircling portion and leg portions extending therefrom, the garment being formed to provide two pairs of free edges, the edges of one pair each extending the entire length of the garment from the neck to the lower extremity of one side of each leg portion, the edges of the second pair each extending from the crotch to the lower extremity of the other side of each leg portion, a pair of slide fastener stringers attached to the first pair of edges, a second pair of slide fastener stringers attached to the second pair of edges, said stringers each having a length substantially equal to the length of the edge to which it is attached, said stringers being provided with spaced interlockable fastener elements of the type permitting a slider to mesh or unmesh them in either direction of slider movement, a pair of sliders for interengaging the fastener elements of the second pair of stringers with the fastener elements of a corresponding length of the first pair of stringers, a third slider for interengaging the remaining lengths of the first pair of stringers with each other, and means for separably coupling the second pair of stringers to the first pair of stringers and the first pair of stringers to each other, said last named separable coupling means comprising two long pins and a fourth slider, one of said pins having means to retain said slider.

27. A garment convertible into a sleeping bag, said garment comprising a body encircling portion and leg portions extending therefrom, said garment being slit from the lower end of each leg portion upwardly to the crotch and from the top edge downwardly to the crotch, the said three slits meeting in a common point whereby the garment may be spread widely open to receive the wearer or sleeper, and a slide fastener assembly to releasably close the slits, said assembly comprising two long stringers, one secured from the top of the garment to the bottom along a leg portion, the other from the top to the bottom along the other leg portion, two short stringers, one secured along each leg portion, three sliders, one on each leg portion and one between the top and the crotch, and three fully separable end stops, the male and female portions or the mating portions of the fully separable end stops at the lower ends of the leg portions of the garment being so disposed relative to one another that the front and rear edges of each leg portion may be joined together when the garment is to be used as a garment, and the rear edges of the two leg portions may be joined together and the front edges of the two leg portions may be joined together when the garment is to be used as a sleeping bag, the third separable end stop at the top edge of the garment comprising two long pins

and a fourth slider having its large or neck end pointed upwardly, one of said pins having means to retain said slider.

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