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[54] **MULTIPLE SIZE SLACKS**

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[52] **U.S. Cl.** **2/237,** 2/234, 2/2

[51] **Int. Cl.** **A41f 9/00**

[58] **Field of Search** 2/237, 221, 236, 220, 76, 2/247, 234

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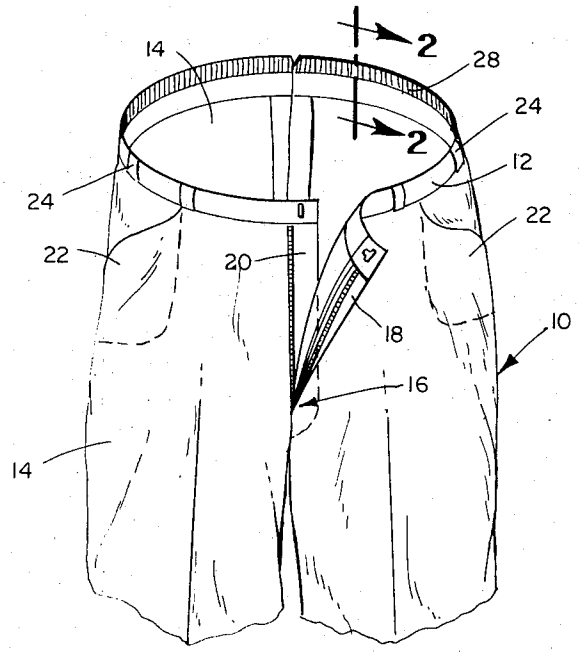
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Primary Examiner—H. Hampton Hunter
Attorney, Agent, or Firm—Woodcock, Washburn, Kurtz & Mackiewicz

[57] **ABSTRACT**

Dress and casual slacks tailored from knit and similar relatively stretchable fabric which are designed to fit approximately three standard sizes without the need for waist and crotch alterations as provided by a coordinated design in which advantage is taken of the inherent elasticity of the stretchable material. The slacks maintain their good appearance and twisting, rolling, stretching, bulging and unsightly appearances are eliminated therefrom.

14 Claims, 7 Drawing Figures



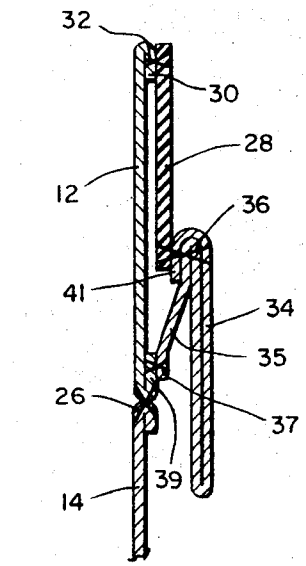


Fig. 2

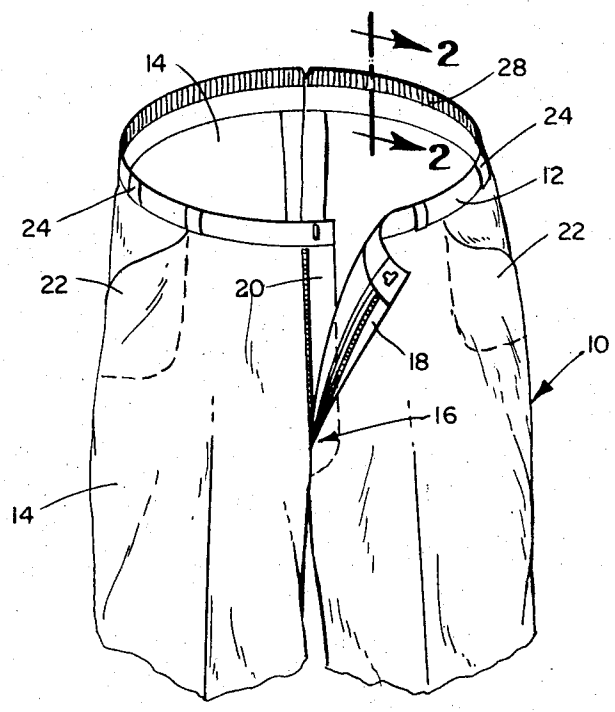


Fig. 1

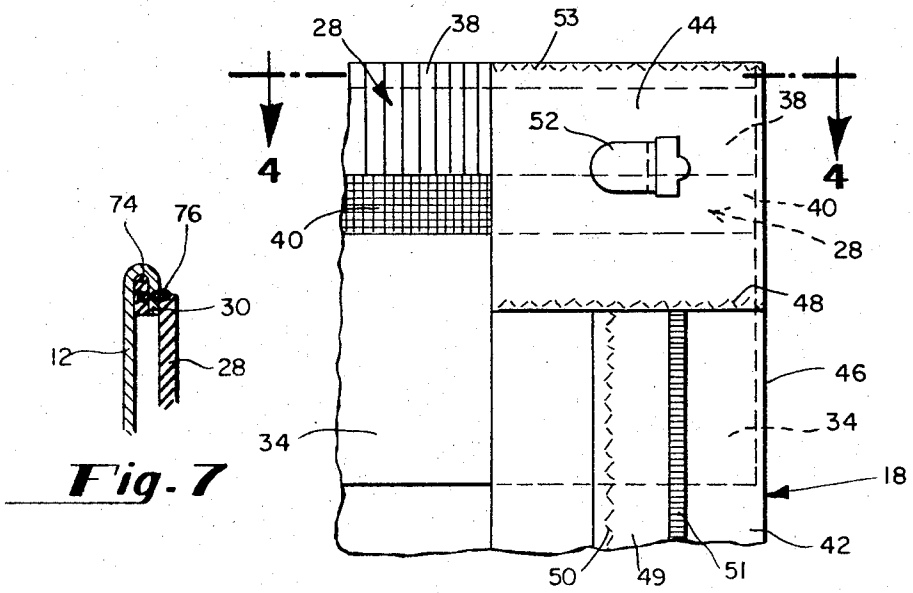


Fig. 7

Fig. 3

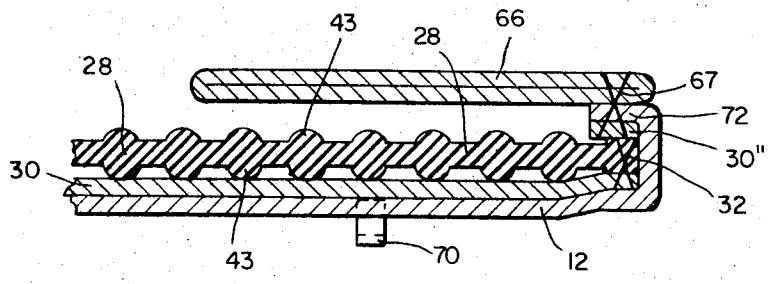


Fig. 6

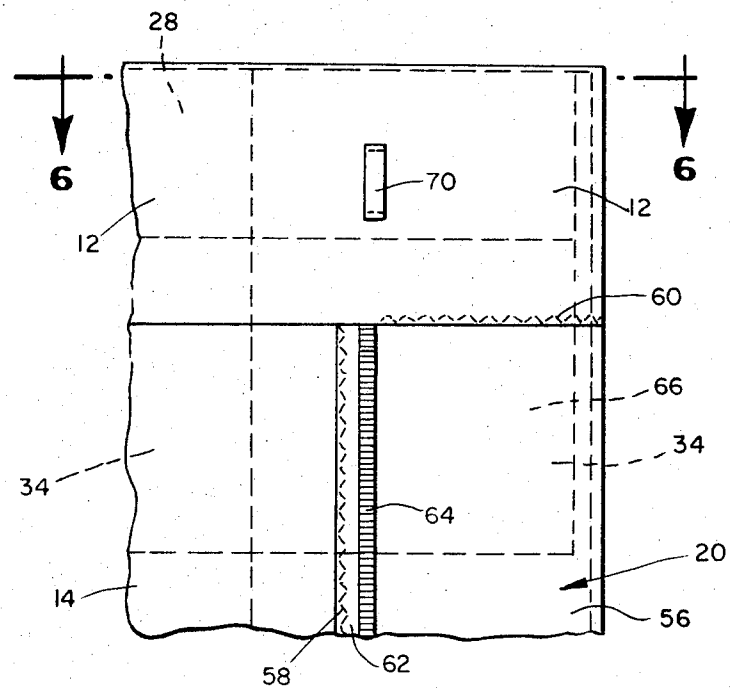


Fig. 5

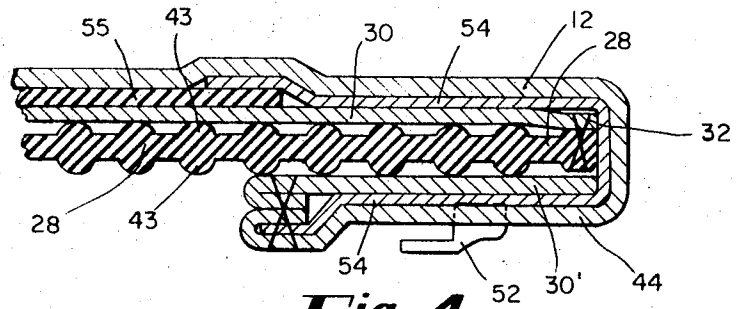


Fig. 4

MULTIPLE SIZE SLACKS

BACKGROUND OF THE INVENTION

1. Field of the Invention

While the textile industry has enjoyed success with knit fabric for many years in such varied uses as ladies stockings, men's underwear, and sweaters of all types, it is only recently that knits have become widely popular for use in men's outer garments such as slacks, sport coats, and suits. The popularity of knit fabric for its flexibility and wrinkle resistant characteristics along with the comfort in hot and cold temperature extremes, have caused it to be in demand for finely tailored suits and slacks. Recently, stretch worsted fabric has also become a popular fabric for slacks and the like. These stretchable fabrics may be used to provide remarkably well fitting slacks when not limited by obsolete tailoring techniques.

The techniques and methods of the subject invention improve upon the construction and assembly of slacks for men, women, and children and while they are of particular value with knit and stretchable materials, they may be used with any fabric to provide better fitting, neater slacks.

2. Prior Art

While elastic strips have been used in waistband construction — Miller, U.S. Pat. No. 3,663,963 — to provide a more comfortable waist fitting and to preclude roll-over of the waistband, further advantages associated with the use of knit, and other stretchable fabrics, have not been sufficiently researched and developed prior to this time.

For many years, the clothing industry has been beset by problems, particularly during the peak seasons, in having alterations made to provide the customer with wearing apparel in the quickest possible time. Often, slacks or suits are bought with a particular engagement in mind and usually there is a rush to have the alterations made, and in fact, sales may depend upon the ability of the clothier to produce altered suits with great haste. Suits and slacks made of knit fabric have the inherent characteristics of flexibility and the fabric itself can stretch to properly fit varied sizes. However, the drawback has been that the construction of the slacks has not been improved to take full advantage of the fabric characteristics themselves thus severely limiting the ability of the slacks to fit more than one precise size.

In purchasing a knit suit, the jacket rarely needs alteration since the standard sizes have enough flexibility and hang properly to fit varied torsos. With the slacks, however, the waist area has always been a problem and with for example, a **42** size jacket, the average waist may run anywhere from 35 inches to 37 inches, or in some cases even vary more. An entirely new concept in the marketing of men's clothing is potentially achievable in that dress suits and dress slacks in off-the-rack fashion may be obtained with only a few minutes required for length alterations assuming that a suitable waist area construction is possible to eliminate completely the need for waist and crotch alterations within a given range of sizes.

In addition, as a general operation, knit slacks can not be usually let out for waist alterations without leaving stitch marks and thus their ability to be adjustable to varying sizes in the past was limited.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the subject invention to provide a design for knit and other stretchable slacks in which the waist and crotch areas are sufficiently well designed to fit a range of sizes rather than the single size concept which has been used in the past.

It is a further object of the subject invention to provide a design for knit slacks in which the full advantages of the flexibility of the knit fabric are taken advantage of to provide a flexibility in fit without hinderance from waistband construction, tailoring techniques, and pocket and fly construction.

It is still another object of the subject invention to provide a tailoring technique for slacks for men, women, and children in which fabric may be cut and fitted as required to provide free flow of the fabric to prevent unsightly areas such as where the fabric becomes unduly stretched, twisted, folded over or bulges.

In accordance with the above objects, applicant has developed a construction for slacks and the necessary accompanying tailoring techniques to provide a pair of slacks which will fit wearers over a range of three sizes or more. An elastic strip having special characteristics is used to reinforce the waistband and the waistband is tailored in such a manner that the folds to which the strip is attached are designed to prevent bulging and being otherwise unsightly, the elastic strip itself being designed to prevent the rolling over of the top of the waist area. The fly portions known in the trade as the white and black fly regions are tailored with the waistband being notched in appropriate places in one embodiment to receive the elastic strip securely but in avoidance of any bulging or binding of the material that would retard the free flow and flexibility of the relatively stretchable knit or worsted fabric. The pockets are cut on a bias to give additional freedom in the waist and lower torso areas.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the waistband area of a pair of dress slacks;

FIG. **2** is a cross-sectional view of the waistband taken along lines **2—2** of FIG. **1**;

FIG. **3** is a partial side elevational view of the black fly construction looking from within the slacks;

FIG. **4** is a cross-sectional top view of the black fly taken along lines **4—4** of FIG. **3**;

FIG. **5** is a partial side elevational view of the white fly looking from outside the slacks;

FIG. **6** is a top cross-sectional view taken along the lines **6—6** of FIG. **5**; and

FIG. **7** is a cross-sectional view of a cutaway portion of the waistband as shown in FIG. **2** in which a header strip is used.

DETAILED DESCRIPTION

The drawings set forth above illustrate dress slacks and the tailoring advances which have enabled the production of slacks designed to comfortably fit the wearer over a range of three sizes, while nevertheless maintaining finely tailored products without portions twisting, stretching or bulging. Involved in this coordinated concept is the use of a relatively stretchable outer fabric

such as knit or stretchable worsted fabric which is cut in a prescribed manner, a waistband construction which uses elastic material and advanced tailoring techniques to produce a flexible-though-always-neat-in-appearance pair of slacks.

With reference now specifically to FIG. 1, a subject pair of slacks 10 is shown having waistband material of a knit or stretchable worsted fabric attached to the garment shell 14. According to modern styling techniques, this waistband 12 and the outer shell material 14 will be of the same fabric. At the front of the slacks, fly portion 16 comprises black fly covering portion 18 and white fly covering portion 20. Side pockets 22 are cut at a bias which although variable will generally be in the range of 25°–30°, taken from a horizontal datum line, for common size men's knit slacks of the popular commercial knits.

More particularly, with respect to the waistband construction, belt loops 24 may be placed therearound at normal intervals. It is of course to be understood that an extension waistband without loops may be used as well since the waistband is form fitting making belts, suspenders and the like unnecessary. As seen in FIG. 2, stretch thread 26 is used for stitching waistband 12 to garment shell 14. Attached to the waistband 12 is an elastic strip 28 which is secured on the small upper inner flap 30 that results in a bight formed by folding the top of the waistband 12 inwardly. The elastic strip 28 is secured to flap 30 by means of stitching 32 for which a cotton polystretch thread is preferred. Attached to the lower portion of elastic strip 28 is an inner curtain 34 of cotton which, to increase its stretchability, is cut on the bias and secured to the elastic strip 28 by means of stitching 36 for which polyester stretch thread must be used. Curtain 34 is doubled over as shown and one flap 35 may be secured by stitching 37 to the lower inner flap 39 of waistband 12 while the other flap 41 may be shortened to prevent bulking. In the alternative, flap 35 may be shortened and flap 41 stitched to inner flap 39.

It will be noted that elastic strip 28 comprises two sections as shown in FIG. 3. The top section 38 comprises a series of reinforced transverse fabric members 43 as best seen in FIGS. 4 and 6 while the lower section 40 is a cross weave of elastic filaments. The elastomer used in the elastic strip may be Lycra Spandex which is designed to be compatible with knits. The design of the top section 38 is such that the top of waistband 12 is buttressed by the transverse support giving the fabric a no-roll quality. That is to say it prevents the waistband from being forced outwardly at its top and not wrinkle and twist from lack of support as it would otherwise do.

With further reference to FIG. 3, the construction of the black fly is shown. Knit fabric reinforcement 43 is stitched to shell 14 along side 46 to form the inside of the black fly 18 and is also stitched by stitching 48 to a folded portion 44 of the waistband 12 which is folded around elastic strip 28 as best seen in FIG. 4. Zipper cloth 49 is attached to the knit fabric reinforcement 46 by stitching 50 to hold one side of zipper track 51. A catch 52 which engages a bar from the white fly side is secured to the folded portion 44 of waistband 12. This folded over portion 44 is secured by stitching 53 to the upper inner flap 30 above stitching 32 which secures elastic band 28 to waistband 12.

The curtain 34 is secured near the base of lower portion 40 of elastic band 28 and can be seen in FIG. 3, however, additional details of the inside structure of the slacks have been omitted from this view for the sake of clarity.

With reference to FIG. 4, it can better be seen that waistband material 12 is folded around elastic band 28 to form folded portion 44. As noted previously, it is held in this folded position by stitching 53 shown in FIG. 3, however, the stitching 53 cannot be seen in FIG. 4, since the section lines 4—4 are taken below the stitching. As the waistband 12 is folded around, the inner flap 30 is also folded around, however, in one embodiment, as can be seen in FIG. 4, this flap 30 is cut at the tip of elastic strip 28 so that it will not bind upon the strip 28. Thus, folded inner flap 30′ results with freedom being provided for elastic strip 28 at its extremity. Also, folded around the strip 28 is a very thin piece of a woven fusible or canvas 54 which is actually fused to and sewn to the waistband 12 and extends coextensive with the waistband 12, the purpose of which is to give the waistband 12 support. Support is provided by the woven fusible 54 and while it is desirable to have the waistband 12 stretchable for the most part, this is undesirable in the fly regions, particularly the black fly 18 which will be pulled and stretched out of shape by the catch if the material is too flexible. The thin fusible or canvas piece 54 provides the needed support, however, it will not bind or cause unsightly bulges. A thin fusible nonwoven stretchable material 55 may be fused around the remainder of waistband 12 to provide support without retarding the ability of the waist area to stretch to accommodate varying sizes.

With respect to FIGS. 5 and 6, details of the white fly 20 are shown. A piece of fly extension material 56 which is of the same outer garment material as shell 14 and waistband 12 is secured to the outer garment 14 to form the white fly by stitching 58 and is secured to waistband 12 by stitching 60. A strip of zipper cloth 62 may also be secured by stitching 62 to hold zipper track 64 which mates with zipper track 51 of the black fly.

In addition to the horizontal curtain 34, there is also a vertical curtain 66 which extends down along the inside of the white fly 20 as secured by stitching 67. The curtain 66 is secured to the waistband 12 above the elastic strip 28, with the stitching and a short inner flap which extends downwardly not being shown. A catch bar 70 is positioned to engage the catch 52 of the black fly 18 by sliding underneath the extended raised portion of the catch 52.

As can be seen from FIG. 6, the waistband 12 at the white fly 20 is not folded to the extent that it is in forming the black fly 18, but it does extend around elastic strip 28 to form flap 72 which is to be sewed to the vertical curtain 66. Once again, as in the case of the black fly 18, the inner flap 30 of waistband 12 also must extend around the elastic strip 28. The inner flap 30 of waistband 12 is notched at the end of elastic strip 28 to prevent the elastic from folding over and to keep an accurate waist measurement thus forming folded portion 30″. The width of the inner flap 30 may be approximately 3/16 of an inch and the notch extends through the complete width of flap 30.

The fusible woven, nonwoven or canvas material 54 may be used to support the white fly 20 in the same manner as shown for the black fly 18, however, this has

not been shown in FIG. **6.** In place of canvas, a fusible or nonfusible woven or nonwoven material may be used. Also the fusible nonwoven stretchable material **55** may extend to the white fly **20** but this likewise has not been shown in FIG. **6.** While the use of fusible support materials has been discussed, it is within the scope of the subject invention to apply support materials by sewing or other acceptable ways.

While the notching of flap **30,** to form flaps **30'** and **30''**, eliminates a binding problem with elastic strip **28,** the same problem may be eliminated by shortening the length of elastic strip **28.**

With reference to FIG. **7,** an alternate embodiment is shown in which a header strip **74** is used to give the waistband **12** more stability and to prevent the elastic strip **28** from riding up above the waistband **12** thus creating an unsightly effect. As can be seen, the waistband **12** has a fold-over or inner flap portion **30** as previously described in the other embodiments. The header strip **74** is inserted between waistband **12** and the inner flap fold-over **30** and is secured by the stitching **76** which also secures the elastic strip **28** to the flap **30.** A Rokap or cross zigzag stitch is preferred and as noted from FIG. **7,** stitches the very top of the elastic strip to the inner flap **30** and the header strip **74.**

To provide a neat appearance, the header strip **74** may be about three-eighths inch wide thus being coextensive with a three-eighths inch wide inner flap. With the elastic strip **28** sewed about three-sixteenths inch below the top of the flap **30,** the stitches will penetrate the middle of the inner flap **30** and the middle of the header strip **74.** This secures the waistband **12** in such a manner that the elastic strip **28** will not rise above the top of the waistband **12.**

The header strip **74** must be of a relatively stretchable material so that it will not retard the elasticity of the waistband assembly and prevent stretchability. The material may be rubber or it may be a non-woven or woven material such as canvas cut on the bias to provide stretchability.

While the use of the subject waistband construction has been discussed throughout as being applied to men's slacks, it is to be clearly understood that the construction may as well be used for women's and children's slacks. In fact, the principles of the waistband construction may also be used for skirts as well as slacks.

While various embodiments of the invention have been shown and described, it will be understood that various modifications may be made. The appended claims, therefore, are intended to define the true scope of the invention.

What is claimed is:

1. A waist assembly for a garment comprising:

a waistband of a relatively stretchable outer garment fabric turned over at its upper extremity to form a bight with a small inner flap depending therefrom;

an elastic strip of one piece construction having an upper portion which is longitudinally elastic including means substantially preventing transverse bending of said upper portion whereby to exhibit no-roll characteristics, said upper portion being positioned adjacent to and sewn to the side of said inner flap facing inwardly to the wearer away from said waistband with the top of said strip being approximately coextensive with said bight; and

a curtain depending from the lower portion of said elastic strip and sewn thereto on the side of said elastic strip facing inwardly toward the wearer and away from said outer garment.

2. The waist assembly of claim **1** wherein said waistband and said small inner flap are folded at one longitudinal extremity to form one side of a fly opening, with said small inner flap being notched at the fold to accommodate said elastic strip.

3. The waist assembly of claim **2** wherein the longitudinal extremity of said waistband and its small inner flap which form the other side of the fly opening are folded, and said small inner flap is notched at the fold to accommodate said elastic strip.

4. The waist assembly of claim **1** wherein said garment has a fly opening and the waistband in the proximity of the sides of said fly opening is reinforced with a material which prevents deformation and pulling of the garment in those regions.

5. The waist assembly of claim **1** wherein said assembly is used on a pair of slacks and is further improved by pockets, the cloth of said pockets being cut on a bias to permit stretch of the slacks without wrinkling.

6. The waist assembly of claim **1** wherein said waistband is reinforced by thin stretchable material relatively coextensive with said waistband and which extends longitudinally around at least a portion of said waistband.

7. The waist assembly of claim **6** wherein said thin stretchable material is fused to said waistband.

8. The waist assembly of claim **1** further including a header strip which is secured between said waistband and said small inner flap.

9. The waist assembly of claim **8** wherein said header strip extends up to said bight and lies substantially coextensive with said small inner flap, said header strip being sewn in position by stitching which also sews said elastic strip to said inner flap.

10. The waistband construction of claim **9** wherein said elastic strip is sewn by Rokap stitching at its upper extremity to said inner flap and said inner flap and said header strip are sewn approximately midway through their widths by said stitching to secure said elastic strip at a position where its upper extremity is below said bight of said waistband.

11. A pair of slacks having accommodating features in which a single pair of slacks is designed to cover a range of three contiguous standard sizes without alteration to the waist, said slacks comprising:

an outer garment shell of relatively stretchable fabric;

a waistband of the outer garment shell material attached at the upper extremity of the outer garment shell and turned over at its upper extremity to form a bight and a small inner flap;

an elastic strip which is longitudinally elastic and having means substantially preventing transverse bending whereby to exhibit no-roll characteristics, said elastic strip being attached to said small inner flap;

a curtain depending from the lower portion of said elastic strip;

pockets in said outer garment shell cut at a bias to provide stretch ability in the slacks commensurate with said waistband; and

said waistband being folded at one longitudinal extremity with said small inner flap being notched to

prevent folding of said elastic strip, and said waistband being terminated at its other longitudinal extremity by a slight fold, said small inner flap at that end being notched to accommodate the elastic strip, one of said above mentioned extremities having a reinforced area to provide added strength to prevent deformation of said waistband and said outer garment shell as said elastic strip is stretched.

12. The slacks of claim **11** wherein said pockets are cut at a bias of 25°–30° to accommodate the stretch characteristics of the elastic band and the knit waistband and outer garment shell.

13. Self-adjusting waistbands for fabric slacks characterized by their inherent adjustability to provide good fitting properties over a plurality of contiguous standard sizes having a waistband portion formed of fabric stretchable in at least its horizontal direction, in combination with

depending elements within said waistband portion, one relatively wide portion of which comprises an elastic strip having one component part of tightly woven fabric and the other component part of which is of ribbed configuration stretchable primarily in a direction lengthwise of the band;

the upper extremity of said waistband portion terminating in a bight from which there depends a relatively narrow inner flap;

stretchable means securing the upper edge region of said ribbed component part of said elastic strip to said waistband adjacent along the length of said bight and disposed on the inner exposed surface of said inner flap;

the second portion of said depending elements comprising a bias cut fabric folded upon itself to form a bight;

stretchable means extending along the concealed face of said last-named bight to secure said bias cut fabric portion of said depending elements to said finely woven portion of said elastic strip, the width of said bias cut fabric portion being sufficient for the same to depend a substantial distance below the lower edge of said finely woven component part of said elastic strip; and

said depending elements comprising two lengthwise sections each extending from the seat-seam of the slacks to positions having their ends coinciding with edge folds of the outer edges of a fly opening.

14. A pair of slacks having accommodating features in which a single pair of slacks is designed to cover a range of three contiguous standard sizes without alteration to the waist, said slacks comprising:

an outer garment shell of relatively stretchable fabric;

a waistband of the outer garment shell material attached at the upper extremity of the outer garment shell and turned over at its upper extremity to form a bight and a small inner flap;

an elastic strip having an upper portion which is longitudinally elastic including means substantially preventing transverse bending of said upper portion whereby to exhibit no-roll characteristics, said upper portion being positioned adjacent to and sewn to the side of said inner flap facing away from said waistband with the top of said strip being approximately coextensive with said bight;

a curtain depending from the lower portion of said elastic strip and sewn thereto on the side of said elastic strip facing inwardly toward the wearer and away from said outer garment; and

said waistband being folded at its longitudinal extremity to accommodate said elastic strip, at least one of said extremities having a reinforced area to provide added strength to prevent deformation of said waistband and said outer garment shell as said elastic strip is stretched.

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