April 24, 1951 J. SINGER 2,550,647

BELT SUPPORT STRUCTURE AND METHOD OF FORMING SAME

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FIG. 1.

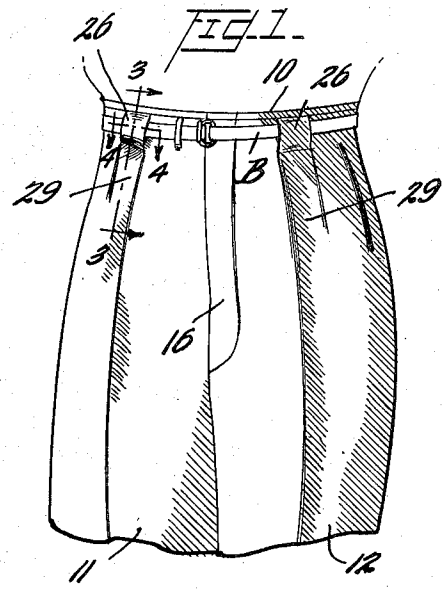


FIG. 2.

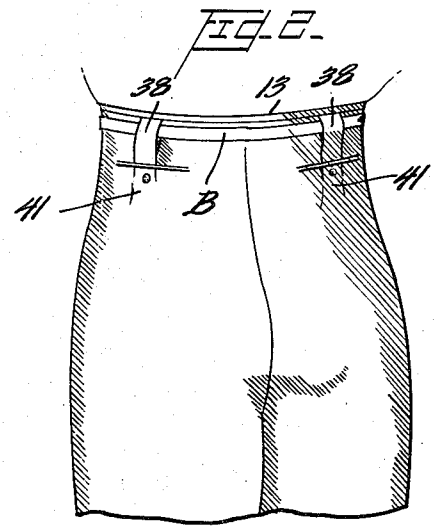


FIG. 3.

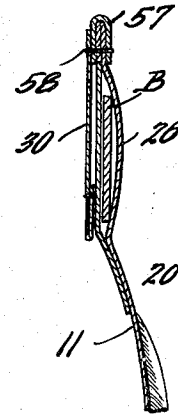


FIG. 4.

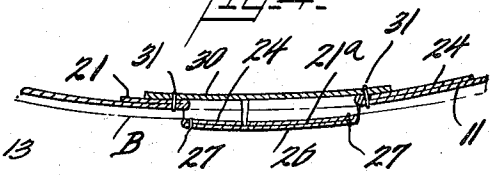


FIG. 5.

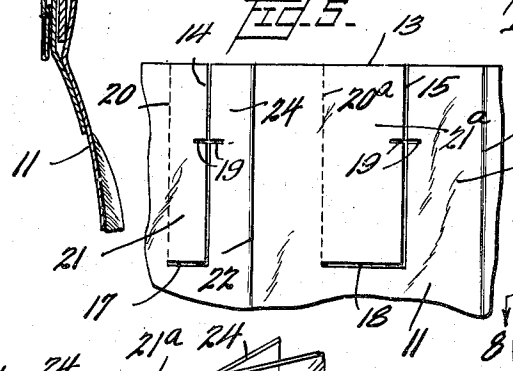


FIG. 7.

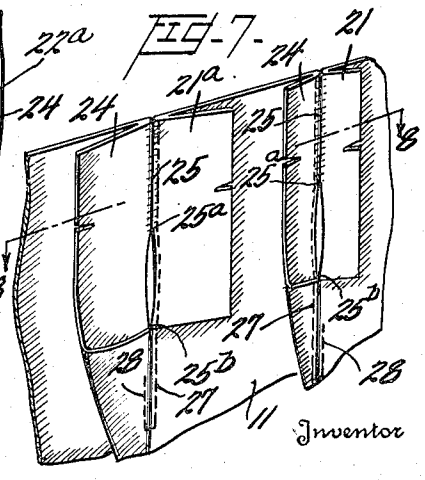
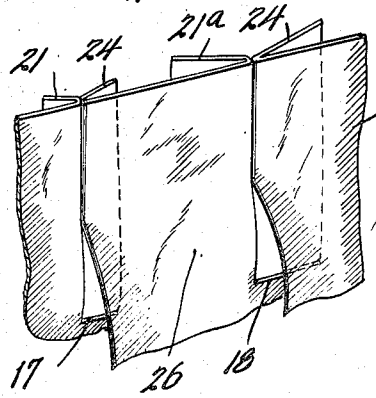


FIG. 6.



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BELT SUPPORT STRUCTURE AND METHOD OF FORMING SAME

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FIG. 8.

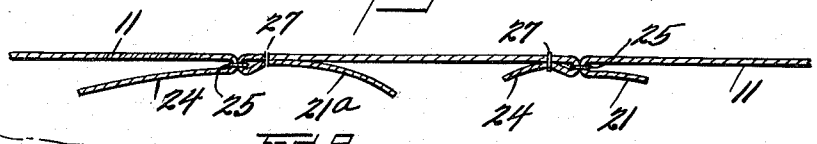


FIG. 9.

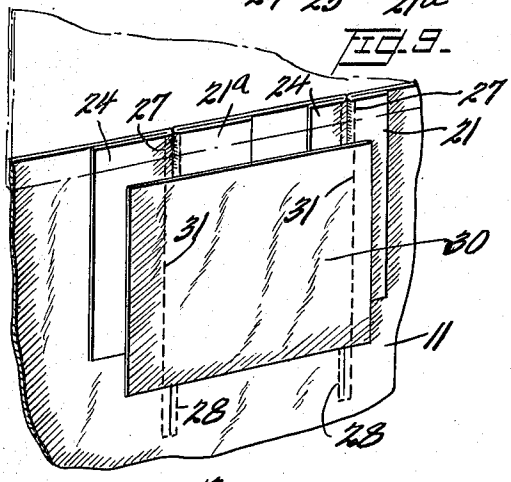


FIG. 10.

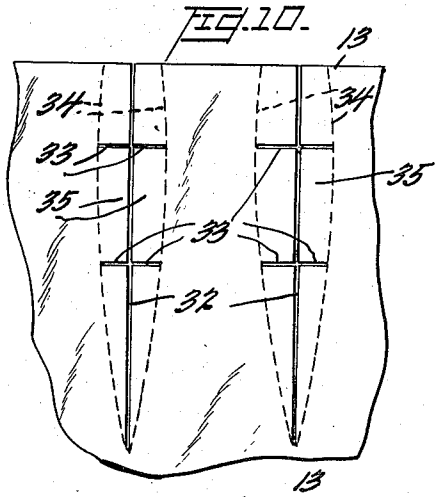


FIG. 11.

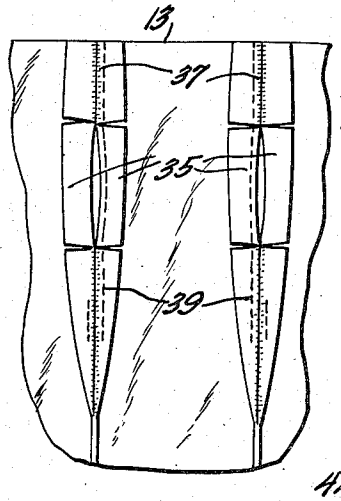


FIG. 12.

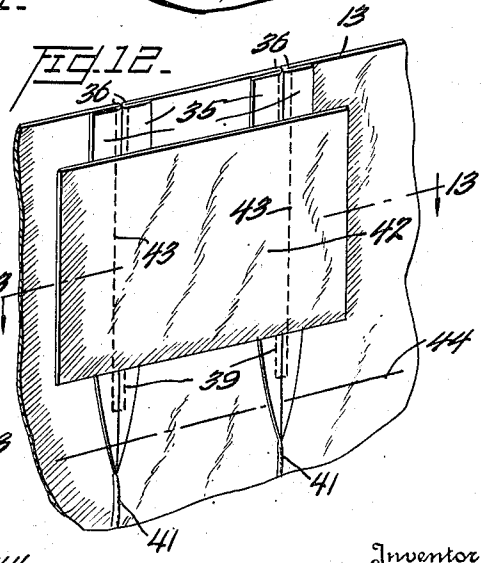


FIG. 13.

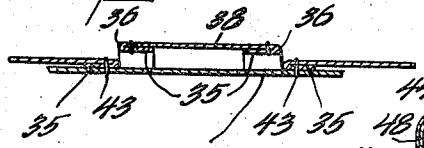
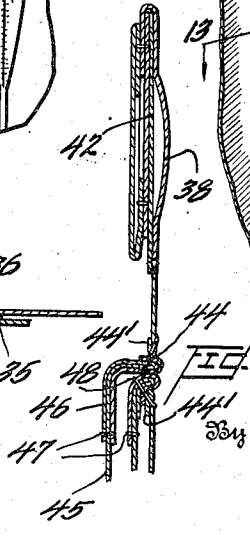


FIG. 14.



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BELT SUPPORT STRUCTURE AND METHOD OF FORMING SAME

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FIG. 15.

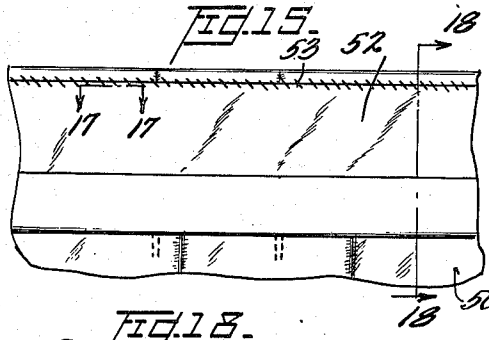


FIG. 16.

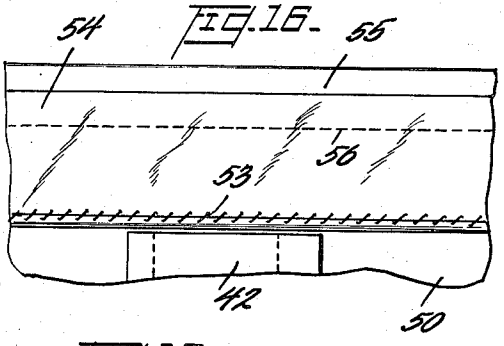


FIG. 18.

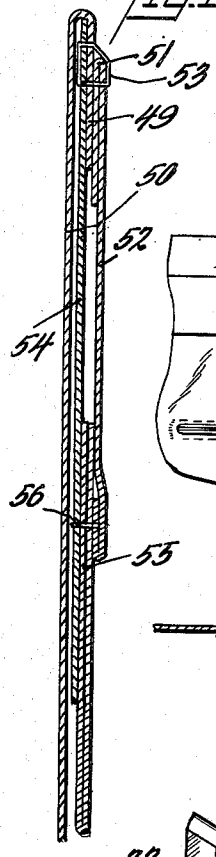


FIG. 17.

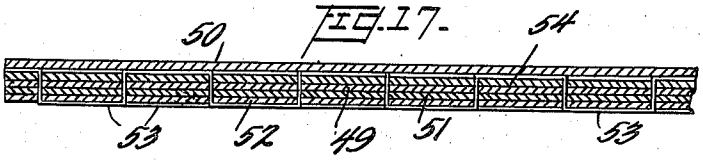


FIG. 19.

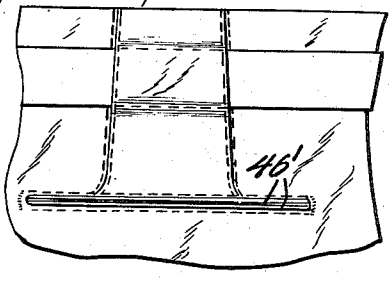


FIG. 20.

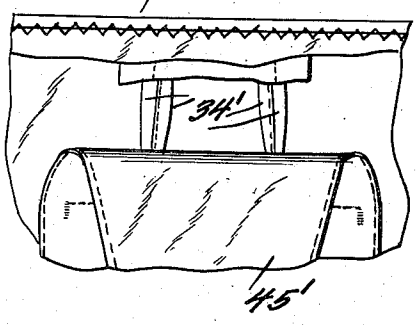


FIG. 22.

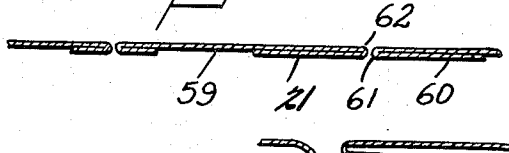


FIG. 23.

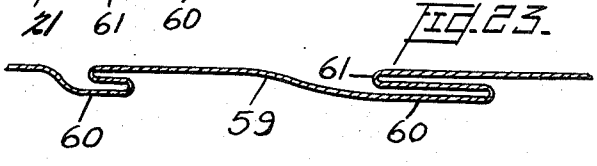
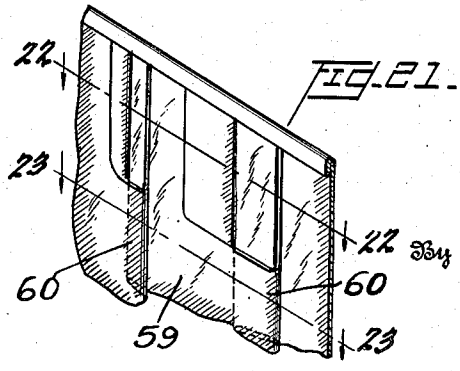


FIG. 21.



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Patented Apr. 24, 1951

2,550,647

UNITED STATES PATENT OFFICE

2,550,647

BELT SUPPORT STRUCTURE AND METHOD OF FORMING SAME

Joseph Singer, Hart, Mich.

Application February 10, 1949, Serial No. 75,671

12 Claims. (Cl. 2—236)

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This invention relates to garments such as trousers, slacks shorts, skirts and other garments having detachable belts and particularly to garments having belt receiving channels of the type generally termed "blind belt straps" as being substantially indistinguishable visually from the remainder of the garment, the belt straps in the present instance being associated with and formed from the upper parts of pleats made in the upper part of the garment to extend downwardly from the waist portion.

More particularly the invention relates to a continuation-in-part of my prior application for patent on Garments filed June 26, 1947, and bearing the Serial Number 757.094, now abandoned.

One principal purpose of this invention is to provide a novel construction of garment having a novel construction of combined blind belt straps and pleats at the waist portion of trousers.

Another object of the invention is to provide a novel trousers construction wherein the garment is finished at the waist by means obviating the necessity of using a waist band while, at the same time, providing the novel arrangement of blind belt strap and pleat.

Until the development of my prior invention above referred to, difficulty was found in combining blind belt straps with pleated garments and a further object of the invention is to provide a novel and improved method of cutting, forming and stitching the garment material whereby areas detached from the body of the garment at the side edges of pleats are formed, such areas constituting blind belt straps.

Still another object of the invention is to produce such an arrangement of pleats and blind belt straps without weakening the construction of the garment.

Further, an object of the invention is to provide an improved construction wherein blind belt straps are formed of material in part integral with that of the remainder of the garment so that such belt straps will not work loose from wear or stress on the stitching used in forming such straps.

With the above and other objects in view, the invention consists in general of certain novel details of construction, combinations of parts and the folding and stitching thereof, the invention also consisting in the method of slitting, folding and stitching the parts, the construction and method being hereinafter fully described, illustrated in the accompanying drawings and particularly claimed.

In the accompanying drawings, like characters

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of reference indicate like parts in the several views, and:

Fig. 1 is a perspective view from the front of a pair of trousers and showing a pair of pleats and associated blind belt straps.

Fig. 2 is a perspective view from the rear of a pair of trousers showing two rear pleats and the blind belt straps associated therewith.

Fig. 3 is an enlarged detail section on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged detail section on the line 4—4 of Fig. 1.

Fig. 5 is a detail elevation showing the slitting of the material of a front panel in the first step of forming the arrangement for producing the pleats and blind belt straps, the broken lines indicating the lines on which the material adjacent the slits is folded.

Fig. 6 is a fragmentary perspective view from the front of the garment with the material adjacent the slits folded.

Fig. 7 is a perspective view from the inside of the garment, the view showing the parts disclosed in Fig. 6.

Fig. 8 is an enlarged section on the line 8—8 of Fig. 7.

Fig. 9 is a view similar to Fig. 7 but showing the back cover in place and stitched.

Fig. 10 is a view of a rear panel showing the slitting forming the first step in the production of the strap or loop, broken lines indicating the lines on which material adjacent the slits is folded.

Fig. 11 is a view from inside the garment showing the portions adjacent the slits drawn together and sewed.

Fig. 12 is a view similar to Fig. 9 but disclosing the arrangement at a rear panel of a garment.

Fig. 13 is a section on the line 13—13 of Fig. 12.

Fig. 14 is a vertical section showing the manner of securing the back pocket of a garment by stitching and disclosing the relation of the pocket to the blind belt strap.

Fig. 15 is an elevation of the inside of the upper part of a portion of a garment with the apron and stiffening strip used in the invention in place.

Fig. 16 is an enlarged view of part of Fig. 15 with apron folded up to better disclose the stiffening strip.

Fig. 17 is a greatly enlarged fragmentary section of the device and taken on the line 17—17 of Fig. 15.

Fig. 18 is an enlarged section on the line 18—18 of Fig. 15.

Fig. 19 is a rear elevation of a portion of a

pair of trousers embodying the present invention and showing a belt, blind belt strap and a pocket opening.

Fig. 20 is an elevation from the inside of the trousers showing the parts behind those shown in Fig. 19.

Fig. 21 is an interior perspective view of a portion of a pair of trousers showing formation of a pleat and the related parts.

Fig. 22 is an enlarged section on the line 22—22 of Fig. 21.

Fig. 23 is an enlarged section on the line 23—23 of Fig. 21.

Referring now to the arrangement shown in the front of a pair of trousers and as shown in Fig. 1 and Figs. 3 to 9 inclusive, the waist line is shown at 10 and extending down from the waist line is a right front panel 11 and a left front panel 12.

In the first step in forming a blind belt loop at the front of the trousers the material is slit vertically downward from its upper edge 13 to provide the two slits 14 and 15. These slits are parallel, the slit 14 being at the hip side of the panel and the slit 15 being on the fly 16 side of the panel. The slits 14 and 15 are of preferably equal length and from the lower ends of these slits extend transverse slits 17 and 18, the slit 17 being shorter than the slit 18. Intermediate the lengths of the slits 14 and 15 preferably short slits 19 extend in both directions from each slit 14 and 15, the purpose of providing these slits 19 being to avoid wrinkling when the parts adjacent the slits 14 and 15 are respectively folded inwardly on lines 20 and 20*a* to provide substantially rectangular first flaps 21 and 21*a*. Also the material is creased or folded on lines 22 and 22*a* parallel to the slits 14 and 15 respectively. These creases respectively form the two pleat edges of a pleated portion of the garment. Then the creases or fold edges formed at 22 and 22*a* are brought respectively into contact with the flaps 21 and 21*a* along the fold lines 20 and 20*a*. These creases and the contacting portions at 20 and 20*a* are then secured in position by blind stitchings 25 which extend from the garment edge to points 25*a* at which the upper edges of the belt loop 26 begin, these side edges being free from the body of the garment to their lower ends at 25*b*. It will be seen that the portions of the garment between the slits and fold lines, when arranged as above described leaves second flaps 24 at the upper edges of the pleat folds, each of said second flaps 24 covering the space defined by said vertical and transverse slits. Each of the first flaps 21 and 21*a* are formed from the material which occupied the space defined by said slits before cutting. This sewing of the folds as described produces a gathering of the material at the waist and assists in forming the pleat on each front panel. The material between the slits 14 and 15 has, in order to prevent wear at the edges of the loop, a line of stitching 27 extending from the edge 13 down below the lower end of the loop 26, the stitching 27 being doubled back as at 28. It will now be seen from Fig. 1 that each of the belt loops forms part of the upper end of a front double pleat 29 and each loop is made from the material of the garment without severance therefrom.

It will also be plain that the side edges of the blind belt loops are spaced circumferentially of the garment and, before insertion of a belt are disguised by lying flush with the adjacent body portions of such garment.

In order to effectually prevent the end of a belt being inserted in a belt loop from passing through the gap behind the loop to feed between the trousers and underwear, there is provided a cover strip 30 which is located within the trousers to lie behind the gap. Stitching 31 at the side edges of the member 30 holds said member securely in place and also passes through the fold portions at the sides of the loops 26.

One form of the invention for use on the back of trousers is shown in Fig. 2 and Figs. 10 to 14, inclusive. As shown in Fig. 10 vertical slits 32 extend downwardly from the edge 13 and at each side of the slits 32 preferably short slits or notches 33 extend into the material, such short slits being for the purpose of avoiding bunching up of the flaps 35 when folded on the fold lines 34. It will be seen that the fold lines 34 preferably converge downwardly so that, by folding on these lines, the edges of the flaps 35 formed by the slits 32 will also converge downwardly upon the folded edges 36 being brought together. The folded edges are blind stitched together at their upper parts as at 37 and are left free from each other for sufficient distance below the blind stitching to form the entries of the belt strap 38 at each side of the rear of the trousers. Extending down from the edge 13 are stitch lines 39 which lie close to the strap edges and terminate in upwardly extending fold lines. The stitch lines 39 serve to hold the folded edges of the belt strap from fraying and separating. As in the front of the garment the drawing together of the folded edges causes gathering of the material as though gores were cut in the material and the edges of the gores drawn together, the effect being to provide fullness of material, said material being then stitched to form pleats 41 below the belt loop or belt strap portions. A rear cover strip 42 is secured to the inner face of the garment by stitching 43 located on the flap 35 opposed to that flap 35 through which the stitching 39 is located. This cover strip closes the gap beneath the belt strap as at the front of the trousers and for the same purpose, the stitching extending through the cover strips, flaps 35 and main parts of the material.

Spaced below the belt straps 38 the material is slit along a line 44 transversely and turned under to form hems 44' (Fig. 14). Each pocket 45 of the usual bag like form has its upper edges provided with bindings 46 secured by stitching 47. The bindings 46 project between the hems 44' and are there secured by the stitching 48.

In Figs. 15 to 18 inclusive is shown the manner of finishing the garment at the waist line so that the usual waist band at the top of the trousers is eliminated. In this arrangement the upper edge of the garment is folded inwardly and downwardly as at 49 behind the body 50 of the fabric. To this folded edge below the top thereof there is secured the folded upper edge 51 of an apron 52, the stitching being shown at 53. A stiffening strip 54 of buckram, hair cloth or other suitable material has its upper edge projecting into the fold 49 and there held by the stitching 53. As shown in Fig. 18 the upper edge of the strip 54 extends above the upper edge of the apron 52 and seats against the inside of the band producing the edge 49, this edge being held between the apron and the stiffener strip and thus holding the upper edge from projecting into sight above the top of the fold 49. The lower edge of the apron may be left free or may be doubled upwardly as at 55 and secured to the stiffener strip by stitching 56.

The apron and stiffener strip thus provide a neat finish covering the upper inside parts of garments and normally covering the upper parts of the folds which in part form the belt straps and the cover strips.

If desired, the upper edge of the trousers may be finished by a waist band **57** held by stitching **58** as shown best in Fig. 3.

The belt, B, in its relation to the invention, is shown in Figs. 1, 2, 3.

In Figs. 19 and 20 a modification of the hip pocket arrangement is shown. Here the pocket edges **46'** are shown as at the lower ends of the contacting fold edges **34'**, the pocket itself being shown at **45'**. Otherwise this modification is like that shown in Figs. 10 to 14.

In Figs. 21 to 23 there is shown the manner in which the pleating is obtained. Here the edges of the double edged pleat **59** are formed by laterally spaced knife pleats **60**, the fold edge **61** of one of which contacts the fold edge **62** formed by the flaps **21**.

The production of trousers or other garments having concealed belt entries in the back waist portion is claimed in copending application Serial No. 216,933, filed March 22, 1951.

What is claimed as new, is:

1. A pair of trousers provided with concealed belt loops and having a vertical pleat on one side of the front center, said pleat extending across the waist region of the trousers, said trousers having a first flap folded in a direction opposite to the fold of the pleat and along an outer fold edge extending upwardly at the waist region from a transverse slit, said first flap having a vertically extending inner edge which has been slit from the front wall of the trousers, the lower end of said edge defining the lower extremity of the vertical slit, a folded second flap having an outer edge, said second flap extending across the waist region of the front wall of the trousers and being folded under the pleat of the trousers, said outer edges of the flaps being secured at the top of the trousers, the fold edges of the flaps being disposed adjacent one another to form one concealed entry of a belt loop, said second flap covering the space defined by said vertical and transverse slits, the first flap having been formed from the material which occupied said space.

2. A pair of trousers provided with concealed belt loops and having a vertical pleat on one side of the front center, said pleat extending across the waist region of the trousers, said trousers having a first flap folded in a direction opposite to the fold of the pleat and along an outer fold edge extending upwardly at the waist region from a transverse slit, said first flap having a vertically extending inner edge which has been slit from the front wall of the trousers, the lower end of said edge defining the lower extremity of the vertical slit, a folded second flap having an outer edge, said second flap extending across the waist region of the front wall of the trousers and being folded under the pleat of the trousers, said outer edges of the flaps being secured at the top of the trousers, the fold edges of the flaps being disposed adjacent one another to form one concealed entry of a belt loop, said second flap covering the space defined by said vertical and transverse slits, the first flap having been formed from the material which occupied said space, said entry having a point of separation from the lower portion of each pleat and downwardly extending stitches at the edge of the pleat below the point of separation.

3. A front trouser panel having a waist region, a vertical pleat on one side of the front center, said pleat extending across the said waist region, a vertically extending slit at the waist region and under the pleat, a transverse slit at the lower end of the vertical slit and under the pleat, and a side flap defined by said slits and folded inwardly from the intersection of said slits, said pleat concealing the space from which said inwardly folded side flap is taken.

4. A front trouser panel having a waist region, a vertical pleat on one side of the front center, said pleat extending across said region, a vertically extending slit at the waist region and under the pleat, and a transverse slit at the lower end of the vertical slit and under the pleat, said panel having inwardly folded flaps, one thereof being defined by said slits and folded inwardly from the intersection of said slits, the space from which the flap defined by said slits is taken being concealed by the pleat.

5. The method of forming a concealed belt loop member in an article of apparel provided with a vertical pleat on one side of the front center of the article, comprising slitting the material of the article downwardly from the waist region of the article and transversely thereto to form a flap portion extending upwardly from the transverse slit, folding the flap portion defined by the vertical and transverse slits inwardly from the intersection of said slits on a fold edge extending upwardly from the end of the transverse slit towards the waist edge, concealing by said pleat the space left when said flap portion is turned inwardly, and securing the waist edge portion of the pleat member at its top.

6. The method of forming a concealed belt loop member on one side of the front center of an article of apparel provided with a vertical pleat having a pleat line, comprising slitting the material of the article downwardly from the waist edge and transversely thereto to form a first flap portion extending upwardly from the transverse slit, folding the flap portion defined by the vertical and transverse slits inwardly from the intersection of said slits and backwardly on the material of the article on a fold edge extending upwardly from the end of the transverse slit and towards the waist edge of the article, forming at the waist region a second flap portion folded back from the front of the article along said pleat line and disposed under the pleat of the article and covering the space from which said first flap portion is taken, and securing said flap portion and edge portion at the top of the article of apparel and adjacent one another to provide a concealed loop entry.

7. A front trouser panel having a waist region, a vertical pleat having a pleat line, said pleat extending across said region, a vertically extending slit at the waist region and under the pleat and a transverse slit at the lower end of the vertical slit and under the pleat, said panel having inwardly folded flaps, one of said flaps being inwardly folded along said pleat line and the other of said flaps being folded inwardly from the intersection of said slits along an outer fold edge extending upwardly at the waist region from said transverse slit, said latter flap being formed from the material defined by said slits, the space from which the flap defined by said slits is taken being concealed by the pleat.

8. In a garment having double edged pleats, belt-receiving channels, one portion of the material defining each belt-receiving channel being

formed integrally and continuously with each of said pleats, the latter being provided with side edges, said channel member having inwardly folded side flaps provided with side edges, each of said side flaps being cut from a portion of the garment material, the space from which one of the inwardly folded side flaps is taken being concealed by an upper portion of one of the pleats, the top waist edges of the pleats being secured at the top, the upper side edges of each pleat being adjacent the circumferentially spaced side edges of each of the belt-receiving channel members and disguising the emergent circumferentially spaced side edges of said channel members.

9. In a garment having double edged pleats, belt-receiving channels, one portion of the material defining each belt-receiving channel being formed integrally and continuously with each of said pleats, the latter being provided with side edges, said channel member having inwardly folded side flaps provided with side edges, each of said side flaps being cut from a portion of the garment material, the space from which one of the inwardly folded side flaps is taken being concealed by an upper portion of one of the pleats, the top waist edges of the pleats being secured at the top, the upper side edges of each pleat being adjacent the circumferentially spaced side edges of each of the belt-receiving channel members and disguising the emergent circumferentially spaced side edges of said channel members, and a cover strip within the garment and spanning the space between the circumferentially spaced side edges of each channel member.

10. In a garment having double edged pleats, belt-receiving channels, one portion of the material defining each belt-receiving channel being formed integrally and continuously with each of said pleats, the latter being provided with side edges, said channel member having inwardly folded side flaps provided with side edges, each of said side flaps being cut from a portion of the garment material, the space from which one of the inwardly folded side flaps is taken being concealed by an upper portion of one of the pleats, the top waist edges of the pleats being secured at the top, the upper side edges of each pleat being adjacent the circumferentially spaced side edges of each of the belt-receiving channel members and disguising the emergent circumferentially spaced side edges of said channel members, said edges being sewed together at their upper parts and free laterally from the body of the material below the sewed parts for a predetermined distance.

11. A pair of trousers provided with concealed belt loops and having a vertical pleat on one side of the front center body material, said pleat extending across the waist region of the trousers, said trousers having a first flap folded in a direction opposite to the fold of the pleat and along an outer fold edge extending upwardly at the waist region from a transverse slit, said first flap having a vertically extending inner edge which has been slit from the front wall of the trousers, the lower end of said edge defining the lower extremity of the vertical slit, a folded second flap having an outer edge, said second flap extending across the waist region of the front wall of the trousers and being folded under the pleat of the trousers, said outer fold edges

of the flaps having been brought together to form contacting fold edges, the latter edges being sewed together at their upper parts and free laterally from the body of the material below the sewed parts for a predetermined distance to form the concealed entry of a belt loop, said second flap covering the space defined by said vertical and transverse slits, the first flap having been formed from the material which occupied said space, said garment having a similarly formed concealed belt entry circumferentially spaced from and in circumferential alinement with said first concealed entry and providing therewith a belt loop, and a cover strip within the garment at the belt loop and spanning the belt loop.

12. A pair of trousers provided with concealed belt loops and having a vertical pleat on one side of the front center body material, said pleat extending across the waist region of the trousers, said trousers having a first flap folded in a direction opposite to the fold of the pleat and along an outer fold edge extending upwardly at the waist region from a transverse slit, said first flap having a vertically extending inner edge which has been slit from the front wall of the trousers, the lower end of said edge defining the lower extremity of the vertical slit, a folded second flap having an outer edge, said second flap extending across the waist region of the front wall of the trousers and being folded under the pleat of the trousers, said outer fold edges of the flaps having been brought together to form contacting fold edges, the latter edges being sewed together at their upper parts and free laterally from the body of the material below the sewed parts for a predetermined distance to form the concealed entry of a belt loop, said second flap covering the space defined by said vertical and transverse slits, the first flap having been formed from the material which occupied said space, said garment having a similarly formed concealed belt entry circumferentially spaced from and in circumferential alinement with said first concealed entry and providing therewith a belt loop, a cover strip within the garment at the belt loop and spanning the belt loop, the garment having its upper edge turned inwardly and downwardly to form a circumferentially extending flap, an apron depending from said last flap and having its upper edge stitched thereto, and a stiffener strip stitched to the apron and having its upper edge extending above said apron between said last mentioned flap and the body of the garment material.

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