April 14, 1936. J. L. BLACK 2,037,060

UNDERGARMENT CONSTRUCTION AND METHOD OF MAKING THE SAME

Filed April 2, 1934 2 Sheets-Sheet 1

Fig. 1.

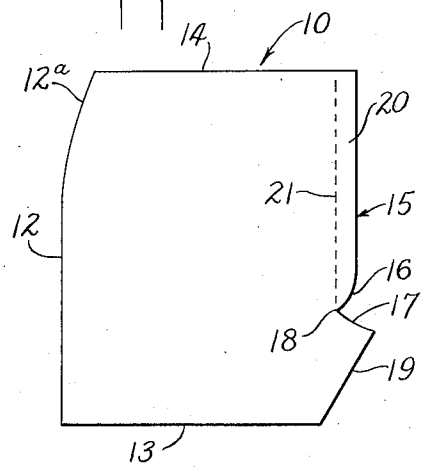


Fig. 2.

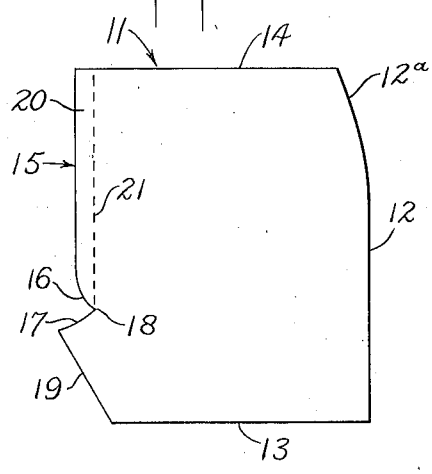


Fig. 3.

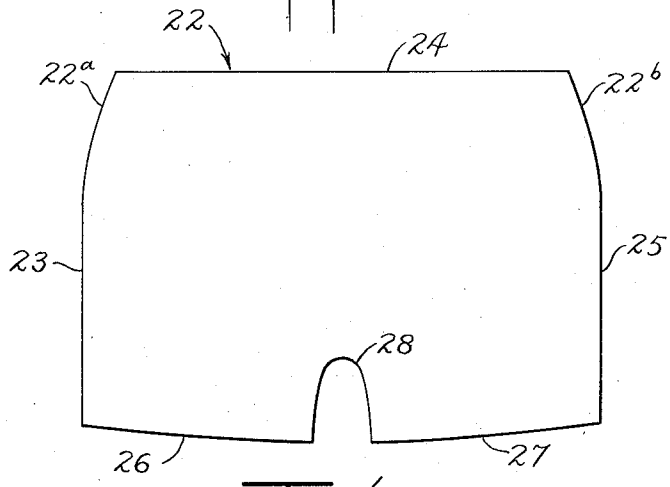


Fig. 4.

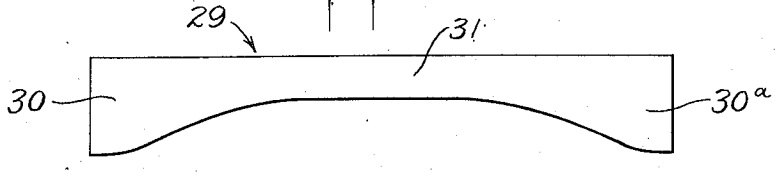
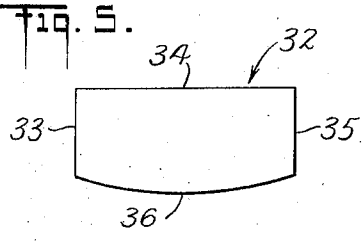


Fig. 5.



INVENTOR
James L. Black
BY Blair, Curtis & Danne
ATTORNEYS

April 14, 1936. J. L. BLACK 2,037,060

UNDERGARMENT CONSTRUCTION AND METHOD OF MAKING THE SAME

Filed April 2, 1934 2 Sheets-Sheet 2

Fig. 6.

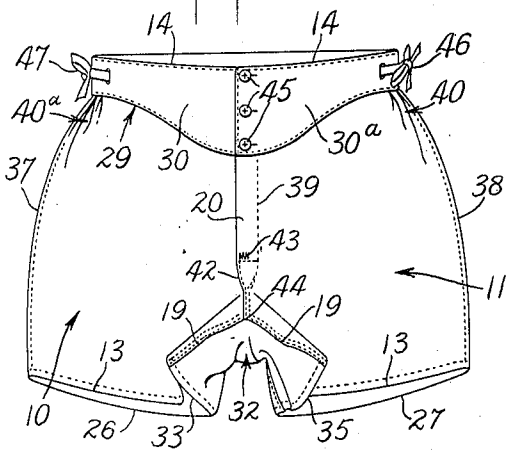


Fig. 7.

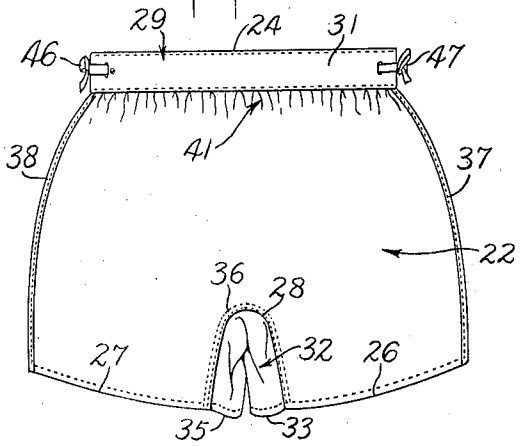


Fig. 8.

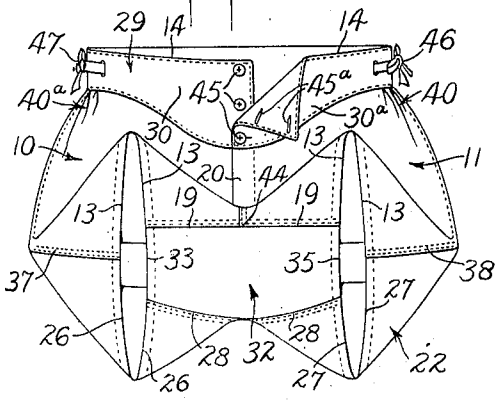
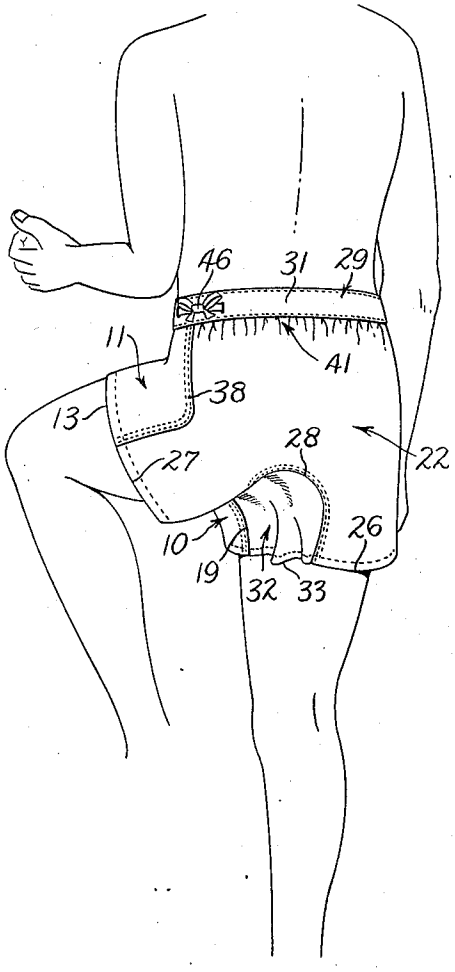


Fig. 9.



INVENTOR
James L. Black
BY Blair, Curtis & Dunne
ATTORNEYS

Patented Apr. 14, 1936 2,037,060

UNITED STATES PATENT OFFICE

2,037,060

UNDERGARMENT CONSTRUCTION AND METHOD OF MAKING THE SAME

James L. Black, Piqua, Ohio, assignor to The Superior Underwear Company, a corporation of Ohio

Application April 2, 1934, Serial No. 718,617

1 Claim. (Cl. 2—224)

This invention relates to undergarment construction and more particularly to undergarments of the so-called "shorts" type and to a method of making the same.

One of the objects of this invention is to provide an undergarment which is light in weight, yet strong and durable and well able to withstand extensive laundering. Another object is to provide an undergarment of the above nature which is simple in design and construction yet attractive in appearance. Another object is to provide an undergarment of the above nature comprising in its entirety a minimum number of individual pieces and accordingly but few seams. Another object is to provide an undergarment of the above nature in which the crotch and seat portions are of ample fullness thus to preclude binding thereby. Another object is to provide an undergarment of the above nature, the separate pieces of which are substantially regular in shape having few curved edges. Another object is to provide an undergarment of the above nature which will not bind when the wearer assumes exaggerated or unusual body positions. Another object is to provide a method of making undergarments of the above nature which is practical and which may be inexpensively practiced either by novices or those skilled in the manufacture of garments. Another object is to provide a method of the above nature which will require a minimum amount of labor and time and which will result in a minimum amount of fabric waste.

Another object is to provide a method of the above nature which may be practiced with little waste in the cutting of the individual pieces. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, arrangements of parts, and in the several steps and relation and order of each of the same to one or more of the others, all as will be illustratively described herein, and the scope of the application of which will be indicated in the following claim.

In the accompanying drawings, in which certain steps of my method are indicated and in which is shown one of the various possible embodiments of the novel features of my invention,

Figure 1 is an elevation of one of the front sections of the undergarment;

Figure 2 is an elevation of the other front section of the undergarment;

Figure 3 is an elevation of the rear or seat section of the undergarment;

Figure 4 is an elevation of the combined yoke and waistband of the undergarment;

Figure 5 is an elevation of the crotch piece of the undergarment;

Figure 6 is a front elevational view of the undergarment;

Figure 7 is a rear elevational view of the undergarment;

Figure 8 is a front view of the undergarment, the leg and crotch portions thereof being folded back upon the front of the undergarment, and

Figure 9 is a perspective view of the undergarment as it appears on a wearer.

Similar reference characters refer to similar parts throughout the several views of the drawings.

As conducive to a clearer understanding of certain features of this invention, it might here be pointed out that undergarments of this general type are usually characterized by complexity of construction due to multitudinous seams, thus causing discomfort to the wearer under various circumstances of activity and when the wearer assumes abnormal and exaggerated body positions. Such garments, in order to follow more closely the contours of the anatomy, generally have one or more seams in the seat portion of the garment. After several launderings these seams constitute the weak portions of the garment and when strains are exerted thereon they rip out readily or shrink in such a manner that the further utility of the garment is considerably lessened without extensive and inconvenient repairs. Furthermore, the crotch portions of such garments are so constructed that they bind and chafe the wearer between the legs and hips rather than provide a comfortable fullness when the wearer is in either an erect, seated, or recumbent position. These undergarments might be characterized as form fitting rather than loosely draped about the hips and between the legs of the wearer. Accordingly, when the wearer sits down or stoops over, these undergarments will cut and bind the legs and hips of the wearer and, when the wearer assumes an erect position, they will gather into a crumpled and wadded mass which will cause considerable discomfort through chafing. One of the objects of this invention is to provide an undergarment in which the above disadvantages as well as many others are effectively eliminated.

Referring now to the drawings, and more particularly to Figures 1 and 2, the two front sections of the undergarment are generally indicated respectively at 10 and 11. While these sections may

be cut from the desired fabric in various different ways, I have found it advantageous to fold the fabric back and forth upon itself until there are a suitable number of layers of fabric alternately front side up and rear side up. Thus it will be seen that when any pattern is cut from the folded fabric, the pieces will be alternately right and left and will, accordingly, not only save considerable waste in the cutting of such pieces, but will also save the time which would otherwise be expended in cutting separately right sections and left sections.

Thus left front section 11 and right front section 10 are shaped simultaneously and are substantially similar in shape and size. Referring now to Figures 1 and 2, the horizontal edges 13 and 14 of the sections are substantially parallel, while edge 12 thereof is at right angles to edge 13; portion 12a thereof curves into edge 14. An edge generally indicated at 15 preferably parallels the greater portion of edge 12 a distance a little over one-half the length of the section, although under certain conditions this edge 15 may be longer or shorter. This portion of edge 15 terminates in curved portions 16 and 17 having junction at 18. In order that the crotch portion of the garment may be more readily formed, the sections are preferably cut so as to form an edge 19 adjoining edges 13 and 17, edge 19 being at a suitable angle to edge 13 preferably in excess of 90° thereto.

By cutting section 10 in this manner, I provide a portion 20 thereof which, when folded back upon the rear side of the body of section 10 along the dotted line 21, forms a facing for the fly of the undergarment, thus obviating the necessity of stitching in or securing in any other manner a separate piece of material to give the preferred stiffness and reenforcement to this part of the undergarment.

Referring to Figure 3, the rear section or seat portion generally indicated at 22 is cut preferably from a pile of fabric of which the individual layers may be alternately rear side or front side up or otherwise as section 22 is symmetrical. Section 22 is preferably formed so that edges 23, 24, and 25 are respectively at right angles to one another. The bottom edges 26 and 27 of sections 22 are preferably at angles slightly in excess of 90° to edges 23 and 25 respectively, the purpose of which will be pointed out hereinafter. To provide further for the construction of the crotch of the undergarment, I have found it preferable to cut from section 22 an inverted U-shaped portion 28 which may be of suitable height and width according to the size of the garment under construction. Also, for purposes to be pointed out hereinafter, I have found it advantageous to cut away the opposite upper corners of sections 22 thus forming slightly curved edges 22a and 22b.

The waistband section may be of any desirable shape. However, I have found it preferable to cut out a waistband substantially the shape indicated at 29 in Figure 4. Thus the yoke portions 30 and 30a of sections 29 will be wider than the waistband portion 31 to provide preferably a double layer of fabric which will better withstand wrinkling than would a single layer, and accordingly not only enhance the appearance, but also improve the fit of the undergarment. A further advantage is to be found in providing this double layer in that it offers a firmer foundation for any fastening means which may be incorporated in this part of the undergarment as will be pointed out more fully hereinafter. Under certain circumstances, as, for example, when a piece of elastic material (not shown) is incorporated into the rear of the garment to lend adjustability to the waist, section 29 may be formed of separate pieces. In any event, however, the length of section 29 controls the waist measurement of the undergarment, subject, however, to the minimum and maximum limits of any adjusting means as will be more clearly pointed out hereinafter.

In order to provide a suitable section to complete the crotch construction of the undergarment, I preferably cut from suitable fabric a crotch piece generally indicated at 32 (Figure 5) having straight edges 33, 34, and 35 preferably at right angles to one another, and a curved edge 36, the purpose of which will be pointed out hereinafter. Under certain circumstances, section 32 may be cut from the waste remaining after yoke and waistband section 29 has been shaped, this depending upon the relative widths of yoke portions 30 and 30a and waistband portion 31.

Thus it will be seen that my undergarment is composed of but few individual pieces, each of which is substantially regular in shape and accordingly having but few curved edges to make the stitching more difficult.

Any suitable order of assembling the several pieces desired may be employed. However, to insure a maximum economy of time and labor, I have found it preferable to stitch edges 12 of front sections 10 and 11 (Figures 1 and 2) to edges 23 and 25 of rear section 22 (Figure 3) respectively, thus forming seams 37 and 38, as more clearly shown in Figures 6 and 7. Next, facing portions 20 of sections 10 and 11 are folded rearwardly of the front of the sections along line 21 and stitched into folded position by stitching 39 (Figure 6). Thus by folding portions 20, a double thickness of fabric is provided along the edges of the fly portion of front sections 10 and 11, and accordingly obviates the necessity of stiching in separate individual pieces of material to provide the preferred relative stiffness to the fly portion of the garment.

Next yoke portion 30 of section 29 (Figure 4) is stitched to the front of front section 11 along edges 14 and 15 (Figure 6). As waistband portion 31 is secured to front section 11 and the rear section 22 at portions thereof adjacent seam 38, those portions are gathered together to form a series of small tucks generally indicated at 40, thus providing ample fullness of the garment to accommodate the bulge of the hip portions of the wearer but still providing a snug fitting waist. In a similar manner, waistband portion 31 is secured to the upper portions of rear section 22 (see Figure 7), those portions being gathered together to form a series of tucks generally indicated at 41 coextensive with edge 24. By gathering rear section 22 into tucks along the waistband, I provide a snug fitting waist, yet insure an ample fullness in the seat portion of the garment to comfortably accommodate the buttocks of the wearer and accordingly preclude uncomfortable binding or creeping of the garment when the wearer assumes exaggerated body positions in the course of violent exercise or the like. Yoke portion 30a is secured to the front of front section 10 in a manner substantially similar to that described with reference to yoke 30, and portions of front section 10 and rear section 22 are gathered together in tucks 40a substantially similar to tucks 40. By providing the curved corners 22a and 22b of rear section 22 (Figure 3) as well as the corresponding portions 12a of sections 10 and 11 (Figures 1 and 2), described above, a neater ap-

pearance and better fit are provided in the vicinity of the tucked portions 40 and 40a.

Preferably front sections 10 and 11 are stitched together along edges 17 (Figures 1 and 2) to form a seam 42 (Figure 6) terminating at the top at stitching 43 and at the bottom at a point 44, point 44 being the common point of edges 17 and 19 of sections 10 and 11 (Figures 1 and 2). Stitching 43 is preferably heavy to provide an adequate safeguard against ripping out seam 42.

To complete the assembly of my undergarment, edge 34 of crotch piece 32 (Figure 5) is stitched to edges 19 of front sections 10 and 11 (Figure 8) which are joined at point 44. Curved edge 36 is stitched to rear section 22 along the edge of cut out portion 28 (Figures 3 and 7). By providing crotch piece 32 with curved edge 36, the stitching thereof to rear section 22 is more readily carried out and the bagginess of the seat portion is more readily effectuated than would be possible if edge 36 were straight. Thus the leg openings of the garment are formed by edges 13 of front sections 10 and 11, edges 26 and 27 of rear section 22, and edges 33 and 35 of crotch piece 32 (Figures 6, 7, and 8). As pointed out above, the angles between edges 23 and 25 and edges 26 and 27 respectively are in excess of 90°; accordingly the rear part of the leg portions of the garment exceed in length the front portions. I have found that this construction effectively prevents the rear leg portions from creeping up the back of the wearer's legs when the wearer stoops over or sits down.

As best shown in Figures 6 and 8, edges 15 of sections 10 and 11 preferably overlap each other a distance substantially equal to the width of sections 20 (Figure 1). Secured to sections 10 and 11 preferably in the vicinity of yoke portions 30 and 30a of section 29 is a plurality of buttons 45 and holes 45a therefor. Under certain circumstances the position of this opening in the garment might be changed, although the position here shown is deemed most advantageous.

In Figures 6 and 7, I have shown my undergarment provided with small ties 46 and 47 by which the waistband can be gathered in or let out, within definite limits, at the will of the wearer. Other methods for obtaining this variation in waist size might be employed, e. g. elastic strips might be substituted for the ties 46 and 47, all according to the particular conditions for which my garment is designed as well as to satisfy the tastes of the wearer.

With reference to Figures 6, 7, and 9, it will be seen that I have provided an undergarment wherein the seat and crotch portions are of such ample fullness as to preclude any creeping or binding of the garment as would otherwise ensue due to exaggerated body positions or abnormal anatomical proportions of the wearer. Furthermore, by providing a seamless back portion, the gathering of the garment between the buttocks and legs of the wearer, as, for example, when the wearer is in an abnormal position, is reduced materially.

With reference to Figure 9, for example, in which is shown a wearer with one leg in a raised position as in running, it will be seen that crotch piece 32 and rear section 22 remain in a draped position and do not closely follow the crevice between the buttocks nor bind the sensitive depending portions of the masculine anatomy as would occur were there a seam running down the center of section 22 and thence between the legs and if all portions of the garment except the waist did not drape loosely about the anotomy of the wearer. By obviating this binding action, edges 26 and 27 of rear section 22 will lie losely along the rear of the wearer's legs and accordingly will not creep up his legs with each succeeding step to form a wadded uncomfortable mass of fabric to shafe the crotch of the wearer. A further advantage accrues in that, due to the absence of seams, the garment is less liable to rip up the back when subjected to strains usually exerted along that portion as when, for example, the wearer stoops over or runs.

Accordingly there has been provided in this invention a construction and method in which the various objects hereinbefore noted, together with many thoroughly practical advantages, are successfully accomplished, and it will be seen that the art may be readily carried on in practice and that the resultant undergarment is well adapted to meet the varying conditions of hard practical use.

As many possible embodiments may be made of the mechanical features of the above invention and as the art herein described may be varied in various parts, all without departing from the scope of the invention, it is to be understood that all matter hereinabove set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

I claim:

In garment construction, in combination, a substantially rectangular seamless rear section having an inverted substantially U-shaped portion cut from the lower central portion thereof, a pair of substantially rectangular front sections respectively stitched to the opposite lateral edges of said rear section, the adjacent free edges of said front sections each being shaped to provide fly-forming portions and crotch-forming portions, said free edges being detachably secured together throughout a portion of their extent, a crotch section having one longitudinal edge secured to the crotch-forming portions of said front sections, and another longitudinal edge secured to said cut-out portion of said rear section to form a closed crotch for said undergarment, the distance between the top of said rear section and the top of the cut-out portion in said rear section being greater than the distance between the top edge of said front sections and the point at which the adjacent edges of said front sections are secured to said cratch section whereby said rear section extends laterally from side to side of the wearer and drapes loosely from the waist of the wearer below his hip portions to prevent portions of said rear section adjacent the crotch of the garment from gathering or wadding between the hips of the wearer, the upper edge of said rear section being substantially wider than one-half of the waist measurement of the garment and adapted to be gathered together in tucks whereby said upper section forms the rear half of the waist of the garment, and securing means on said front sections adapted to hold said front sections in closed relationship.

JAMES L. BLACK.