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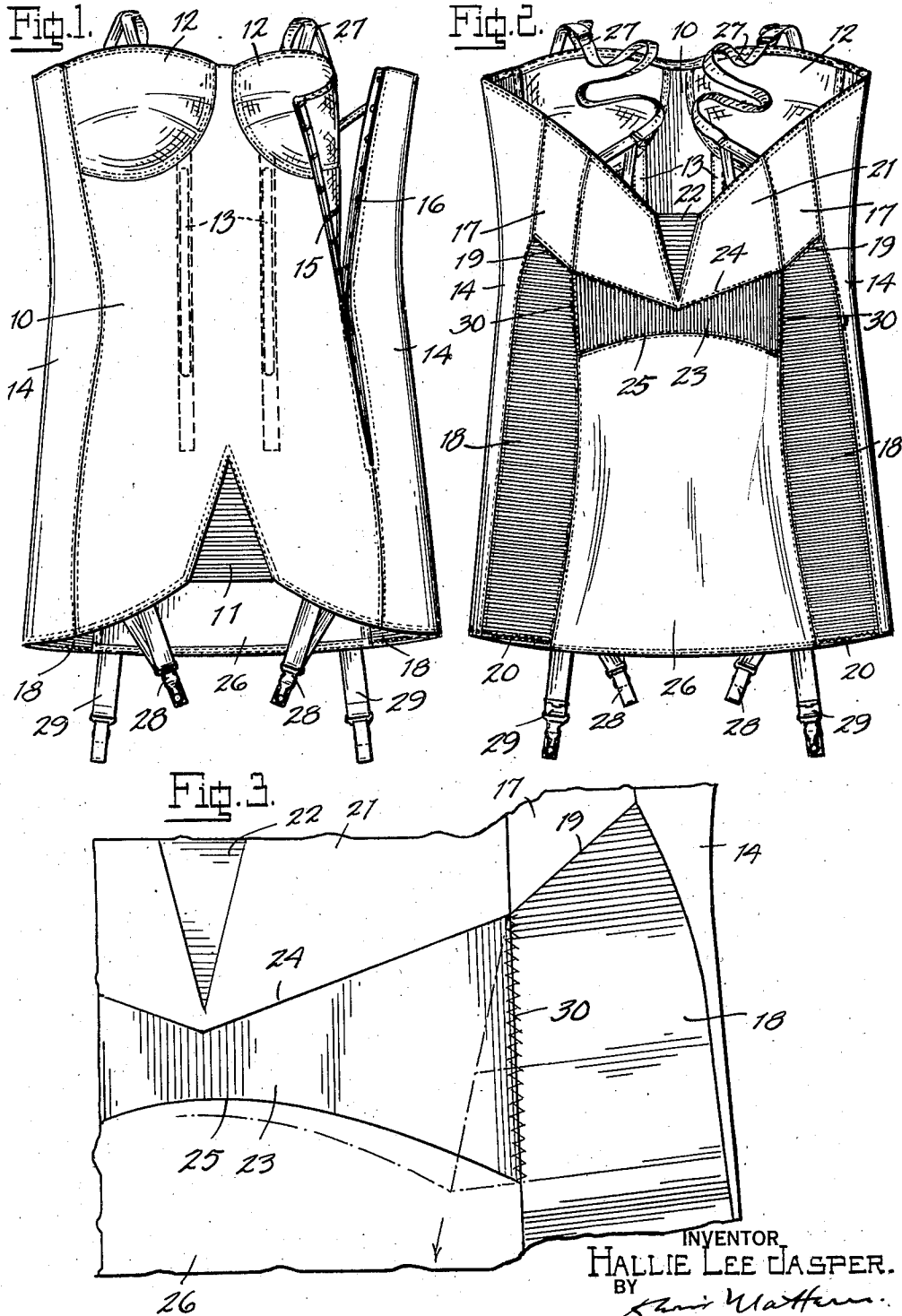
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2,366,032

FOUNDATION GARMENT

Filed Feb. 5, 1943

2 Sheets-Sheet 1



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Fig. 4.

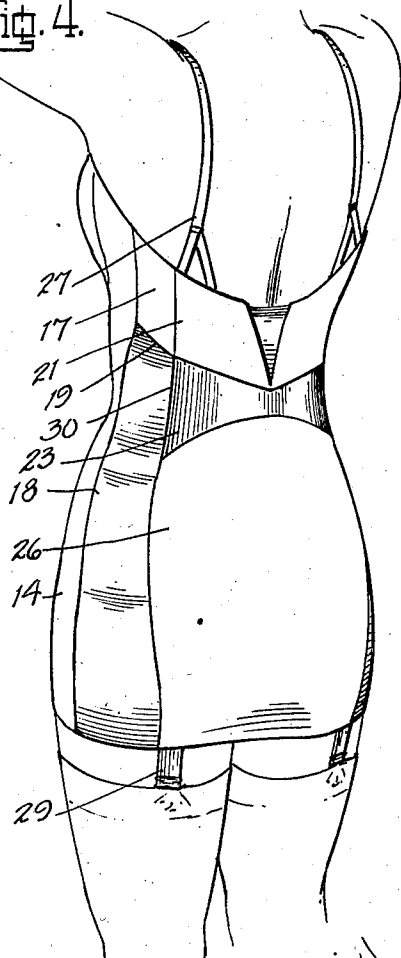


Fig. 5.

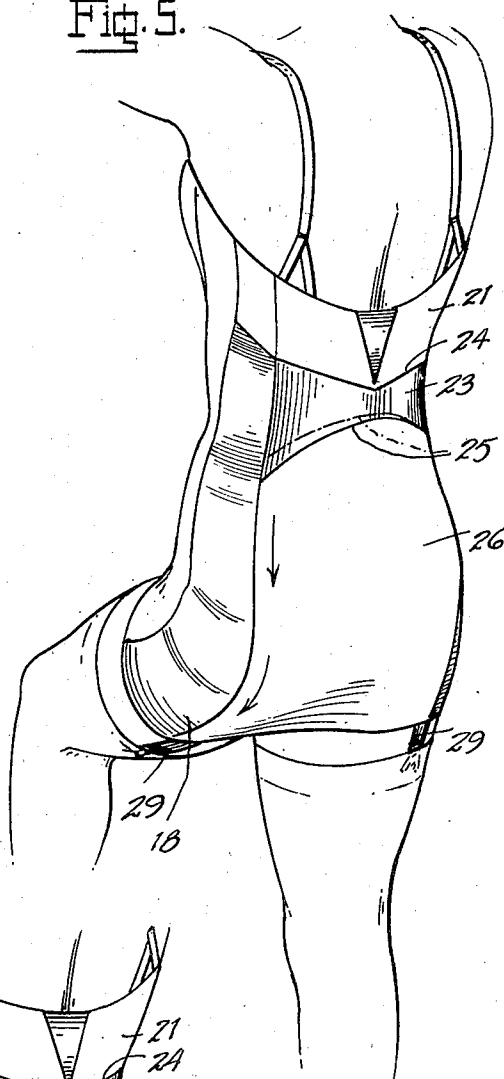
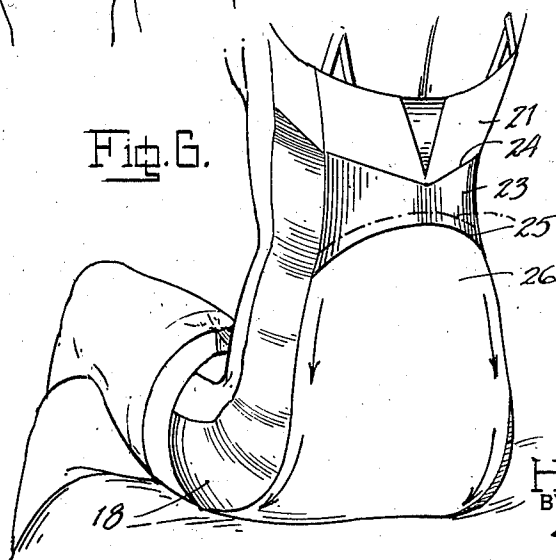


Fig. 6.



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FOUNDATION GARMENT

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3 Claims. (Cl. 2—37)

The present invention relates to an improvement in foundation garments, and particularly a garment of the corselet type of relatively lightweight construction, and wherein a minimum area of elastic material is employed while obtaining the desired body moulding characteristics of such garments.

An object of the invention is to so arrange the elastic material that the various tensions and strains set up in such garments through the normal postures assumed, as standing, sitting, bending, climbing, etc., will be so distributed that strain upon the rear garters and the stockings which is apt to produce runs in the latter will be reduced, and the tendency of the garment to ride up when resuming a standing posture from a sitting or bending posture is reduced. This latter condition is usually produced in a tube-like garment in which the back panel is non-expandable, or highly resistant to expansion, the lengthening of the contours of the body below the waistline causing the body to tend to slide out of the lower portion of the garment, while the upper portions of the garment at and above the waistline tend to stay in place upon the body. Consequently, when assuming a standing posture from a bending or sitting posture, the friction between the garment and the body causes the lower portion of the garment to ride up as the lengthened contours of the body shorten and the lower portion of the body attempts to slide back into the garment.

Various types of garments have been devised wherein the back panel is expandable, so that the portion below the waistline may remain substantially fixed on the body as the body contour lengthens and shortens, being allowed to move vertically relative to the portions of the garment above and at the waistline. As the rear garters are of necessity at each side of the vertical center line of the back panel, the pull and strain lines upon the garment when assuming various postures are substantially in line with these rear garters, that is along each side of the back panel, the intermediate central portion of the back panel being less subject to vertical strain. However, in previous garments of the expandable back type no provision has been made for this differential strain, but on the contrary, such garments have included expandable means wherein the expandability, or the elasticity, in case of elastic inserts, has been entirely confined to or predominant in the intermediate central portion of the back panel, so that the side portions of the back panel in line with the strain lines of the garters im-

posed greater resistance to expansion than the intermediate central portion. Such garments do not compensate for the unequal strains upon the back panel, and consequently have a tendency to twist, ride up, and exert excessive strain upon the garters and stockings.

It is proposed in the present invention to provide an elastic insert in the back panel, substantially at the waistline, having differential vertical elasticity at its central and end portions, the end portions of the insert in line with the garter strain having relatively greater elasticity and less resistance to pulling strains, while the intermediate central portion has less elasticity and greater resistance to pulling strains. The shape of the vertically elastic insert in its preferred form is characterized by relatively wide end portions and a contracted central portion. This shape, in addition to its functional characteristics related to the differential strains upon the garment, requires a minimum area of elastic material, and also causes the garment to better conform to the body contours.

A further object is to provide a vertically elastic insert directly connected along relatively long substantially vertical lines to the horizontal-stretch side panels of the garment, the connection consisting of expansible stitching, whereby lengthening of the connection line is permitted through the horizontal stretch component of the side panels.

With the above and other objects in view, an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings—

Fig. 1 is a front plan view of a foundation garment, according to the invention, the same being shown flattened out, and the fastening means being shown partially open.

Fig. 2 is a rear plan view, also shown flattened out.

Fig. 3 is an enlarged diagrammatic view, showing cooperative portions of the vertical-stretch insert and one of the horizontal-stretch side panels, and showing in dot-and-dash lines a stretched position.

Fig. 4 is a perspective view from the rear, showing the garment as worn, the wearer being shown in a standing posture.

Fig. 5 is a similar view, showing the left leg of the wearer raised, as in a climbing posture.

Fig. 6 is a similar view, showing the wearer in a sitting posture.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, the foundation garment, according to the exemplary embodiment of the invention illustrated therein, comprises a front section consisting of a front panel 10 made of any suitable non-elastic fabric material, provided centrally of its lower edge with a triangular horizontally elastic gusset insert 11, and provided at its upper end with brassière portions 12—12. The front panel 10 is preferably lined and provided with vertical stays 13—13. Its side edges are slightly curved in along the waist portion and curved out along the hip portion.

To the side edges of the front section there are secured forward side sections 14—14 of non-elastic fabric, extending between the upper and lower edges of the garment, their upper edges being inclined downwardly and rearwardly to conform to the usual upper edge design of such garments, wherein such upper edge extends from the brassière sections to the center of the back along downwardly and rearwardly inclined lines. The forward side section 14, at one side, is stitched to the side edge of the front panel 10 from the lower edge of the garment to a point substantially in lateral line with the upper end of the elastic gusset insert 11, and from this point to the upper edge of the garment there are provided suitable fastening means, shown in the illustrated embodiment as a strip of hook members 15 secured to the edge of the front panel 10 and a strip of eye members 16 secured to the edge of the side section 14. Obviously, a zipper fastening, or other suitable fastening means may be employed.

To the rearward edges of the forward side sections 14—14 there are secured rearward side sections, each comprising an upper non-elastic fabric portion 17 which constitutes a part of an upper body encircling band extending rearwardly from the brassière portions 12, the lower edges of these portions 17 being inclined downwardly and rearwardly and being disposed in proximity to the waistline. The side sections below the portions 17 each comprise a horizontally elastic panel 18, the upper edge of which is inclined downwardly and rearwardly to conform to the lower edge of the upper portion 17 and is secured thereto by stitching 19. The hem of the lower edge of the panel 18 is secured by suitable zig-zag stitching 20 capable of expansion with the horizontal stretch of the panel.

To the rearward edges of the rearward side sections there is secured the back section of the garment, which comprises an upper portion 21, formed of non-elastic fabric material, and provided centrally with a horizontally elastic gusset insert 22, its upper edge being inclined in V-form from each side edge in continuation of the upper edges of the side sections of the garment. Its lower edge, which extends at each end to the ends of the inclined upper edges of the elastic side panels 18 are inclined downwardly toward the center at a smaller angle than the angle of said inclined upper edges of the side panels for the purpose of conforming to the vertically elastic expansion insert 23 of the back section of the garment.

The expansion insert is especially shaped, according to the invention, to take the various strains and tensions imposed upon the back section of the garment in a compensating manner

directly related to differentials existing between these strains and tensions, and as will hereinafter more fully appear. The insert is arranged approximately at the waistline, its upper edge 24 being of V-form and extending at its ends to the ends of the upper edges of the side panels 18, and its lower edge 25 being of concavely curved form. The back section below the insert 23 comprises a non-elastic fabric panel 26, convexly curved at its upper edge and secured to the lower edge of the insert, and its side edges being secured by stitching to the convexly curved rearward edges of the horizontally-elastic rearward side panels 18—18. The illustration in Fig. 2, shows these panels 18 as lying flat, so that the side edges of the panel 23 which are in fact convexly curved appear concave, the resulting fullness in the back panel being shown close to each of the side panels.

Shoulder straps 27—27 are connected between the brassière sections 12 and the upper edge of the upper back section 21. Front garters 28—28 are connected to the lower edge of the front panel 10, and rear garters 29—29 are connected to the lower edge of the rear panel 26 adjacent the seam between the back panel and the rearward side panels 18.

The vertically elastic insert 23 is relatively narrow at the center and increases in vertical width toward each of its side edges, and these side edges are secured to the side edges of the horizontally elastic side panels 18 by zig-zag stitching 30 capable of vertical expansion and contraction upon expansion and contraction of the insert. This action is illustrated diagrammatically in Fig. 3, wherein the dot-and-dash lines show the manner in which the horizontal stretch of the side panel permits a lengthening of the line 30 simultaneously with vertical stretch of the end portion of the insert 23. The insert is formed from suitable elastic material having one-way stretch, this material usually consisting of woven strands wherein the vertical strands have a rubber core rendering such strands elastic.

It will be seen that for a given extension of the lower edge of the elastic insert 23 wherein the central portion is relatively narrower than the end portions, that the relatively long elastic strands at the end portions will have more elasticity and less resistance to stretching than the relatively shorter elastic strands at the narrow central portion. According to the invention the relatively wide end portions are disposed in direct line with the rear garters 29, so that in assuming various postures the pulling strain upon the garment, which is directly along these lines, will be compensated by the greater yieldability of the end portions of the insert in the line therewith. Consequently in assuming a sitting posture from a standing posture, the back panel 26 will tend to remain in place upon the body as the contour of the body lengthens in assuming such sitting posture and the strain upon the rear garters is taken up in the elastic insert through the easy yieldability of the end portions of the insert in line with the strain. Hence, the lower edge of the lower back panel 26 remains substantially fixed upon the body due to the fact that the strains upon the garment caused by lengthening of the body contours, are taken up mainly in the easily yieldable end portions of the insert section rather than in the garters. Thus, when resuming a standing posture from a sitting posture the bottom line of the back panel 26 remains sub-

stantially fixed while the shortening of the contours of the body takes place through sliding between the bottom edge of the garment and the upper edge 24 of the elastic insert, the insert contracting as these contours shorten. Thus, riding up of the garment is prevented.

The compensating action of the garment is especially desirable in assuming a posture where the pulling strain is at one side only, as in climbing, and wherein the strain is along the line indicated by the arrows in Fig. 5 illustrating the case of raising one leg while the other leg is in standing position. In the case of assuming a sitting posture the strain is in line with the garters on both sides, as indicated by the arrows in Fig. 6. In addition to its functional characteristics of providing increased elasticity and less resistance to stretching in line with the back garter strain lines, the novel form of the elastic insert greatly conserves elastic material, the amount of material required in the garment being greatly reduced while obtaining full elastic effect. Also the convergent center of the insert causes the back of the garment to better conform to the figure, particularly at the curve of the waistline where wrinkling has been experienced in garments employing a large area of elastic material at this point.

While the elastic material of the insert member 23 is preferably of the woven fabric type known as "one-way stretch," wherein the elastic threads are disposed in one direction only, it will be understood that other types of elastic material may be employed which is elastic in one direction and non-elastic in the other, or wherein the material has elasticity in both directions. This also applies to the elastic material of the rearward side panels 18.

I have illustrated and described preferred and satisfactory embodiments of the invention, but it will be understood that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A foundation garment, comprising a front section, side sections, and a back section including a non-elastic back panel member extending from the lower edge of the garment to a transverse line in proximity to the waistline, an upper member vertically spaced from said back panel member disposed above the waistline, a vertically elastic transversely disposed insert member secured between said back panel member and said

upper member and having greater vertical inherent elasticity and stretching capacity at its end portions than at its central portion, and back garters secured to the lower edge of said back panel respectively in proximity to each side edge thereof, their pull lines being substantially in vertical line with the end portions of said insert member.

2. A foundation garment, comprising a front section, side sections, and a back section including a non-elastic back panel member extending from the lower edge of the garment to a transverse line in proximity to the waistline, an upper member vertically spaced from said back panel member disposed above the waistline, a vertically elastic transversely disposed insert member secured between said back panel member and said upper member having relatively wide vertically extending end portions and a relatively narrow vertically extending central portion, whereby said end portions have greater vertical inherent elasticity and stretching capacity than said central portion, the upper and lower edges of said insert member being relatively close at the vertical center and diverging from each other toward the end edges, and back garters secured to the lower edge of said back panel respectively in proximity to each side edge thereof, their pull lines being substantially in vertical line with the end portions of said insert member.

3. A foundation garment, comprising a front section, side sections including horizontally elastic members having rearward substantially vertically disposed edges, and a back section including a non-elastic back panel member extending from the lower edge of the garment to a transverse line in proximity to the waistline and secured to the rearward edges of said elastic side members, an upper member vertically spaced from said back panel member disposed above the waistline, a vertically elastic transversely disposed insert member secured at its transverse edges to said back panel member and said upper member and secured at its side edges to the rearward edges of said elastic side members, said insert member having greater vertical inherent elasticity and stretching capacity at its end portions than at its central portion, and back garters secured to the lower edge of said back panel respectively in proximity to each side edge thereof, their pull lines being substantially in vertical line with the end portions of said insert member.

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