

Dec. 26, 1944.

G. E. HAWES

2,366,026

CORSET AND THE LIKE

Filed Jan. 23, 1941

2 Sheets-Sheet 1

Fig. 1.

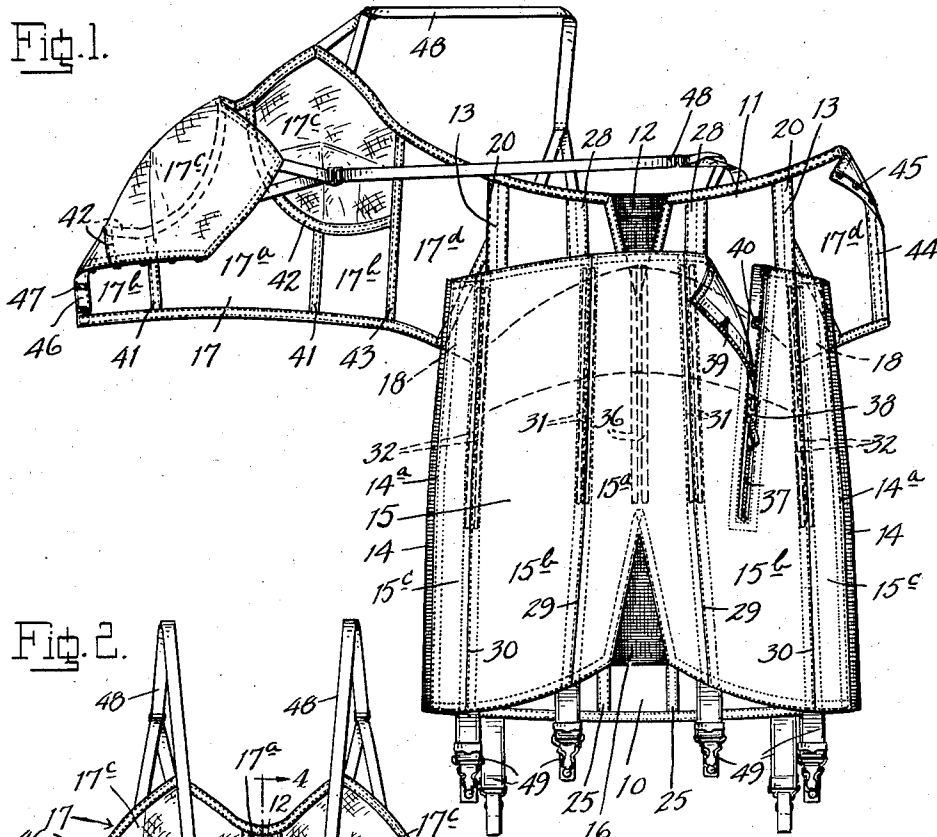
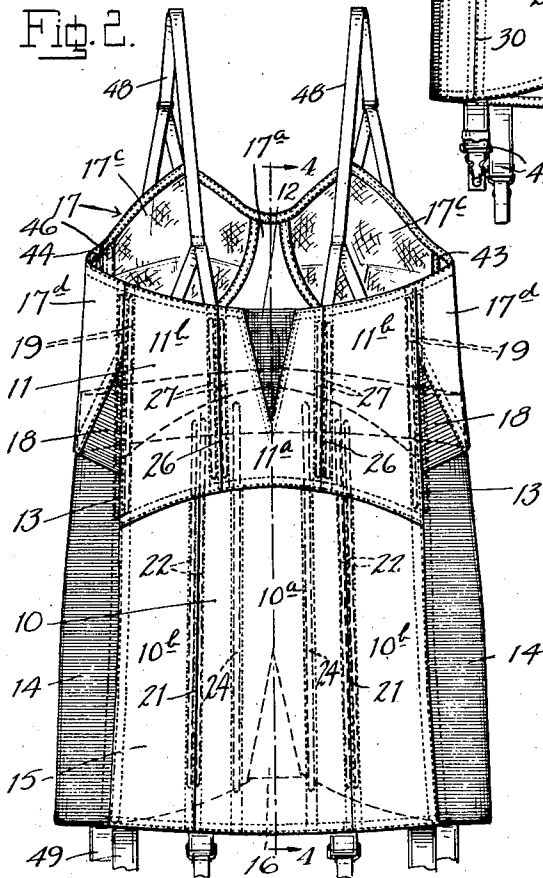


Fig. 2.



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Fig. 3.

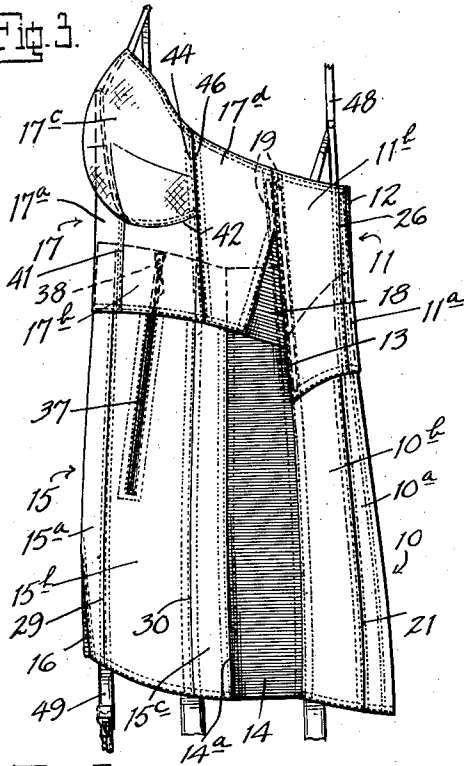


Fig. 4.

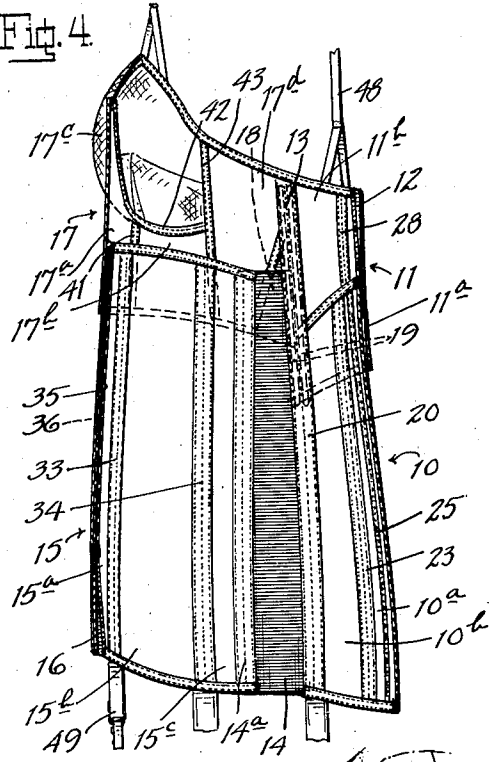


Fig. 5.

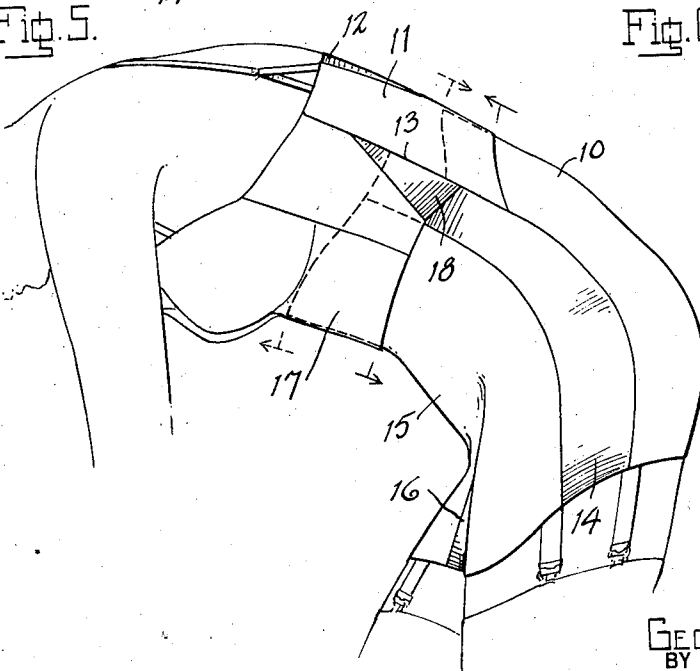
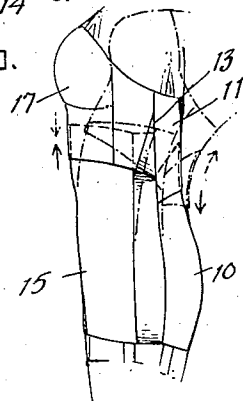


Fig. 6.



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CORSET AND THE LIKE

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Application January 23, 1941, Serial No. 375,563

4 Claims. (Cl. 2—30)

The present invention relates to an improvement in foundation garments, such as corsets and the like, and is an improvement over the invention disclosed in the patent to George E. Hawes, for Corsets and the like, No. 1,837,865, granted December 22, 1931, reissued August 7, 1934, Reissue No. 19,264. In this patent there is disclosed a garment including front and back portions, each consisting of separately formed upper and lower vertically offset overlapped telescoping parts and relatively wide elastic side portions extending the full length of the garment and interposed as laterally yieldable non-telescoping spacers between the front and back portions. According to the invention disclosed in this patent, the upper and lower parts of the front and back portions are adapted to maintain independently their positions upon the body upon relative movement of the body below the waistline, whereby the overlapping portions have telescoping action to expand and contract the front and back portions upon the lengthening and shortening of the surfaces of the front and back of the wearer upon assuming different postures, as for instance standing, sitting, and bending forwardly or backwardly. It has been found that the sides of the body in the region of the waistline have a relatively small area which may be referred to as a neutral axis point or sphere which remains in a fixed relation while other parts of the body move with respect to it, and in the structure disclosed in this patent the spacing of the front and back telescoping parts by the elastic side sections is such that the one or the other of them are removed from direct proximity to this neutral axis point, their connection with it being through the non-telescoping side portions.

It is an object of the present invention to provide a garment in which the front and back relatively movable portions are directly connected and movable with respect to a common vertical line at each side coinciding with this neutral axis point or sphere, to the end that in assuming different postures the relatively movable upper and lower parts of the front and back sections will have free telescoping movement relatively to said neutral spheres without the restriction of intervening non-telescoping portions.

A further object is to provide a garment of this character including a body surrounding brassière section comprising the upper parts of the front and back portions, and which constitutes a continuous supporting band about the upper part of the body in which the front and back

portions have complementary pivotal movement about the neutral axis points or spheres at the sides of the body, so that in assuming a sitting or bending-over position the telescoping action of the back portion will be relatively unrestricted and assisted by the action of the front portion, while at the same time the front portion will have free telescoping action without crowding or compressional strains upon the front portions of the body, this being brought about by the structure wherein the telescoping parts of both the front and back portions are freely movable with respect to each other from the same vertical line of the neutral axis point or sphere.

A further object is to provide a garment in which the lower part of the front portion will provide a complete and substantial support for the abdomen and diaphragm without crowding or compressive pressures. It is a further object to provide a garment which will permit free movement of the body between various postures without appreciable wrinkling or twisting of any portions of the garment, the relative movement of the body with respect to the garment resulting from lengthening or shortening of parts of the back and front lines of the body in assuming different postures being permitted to take place with a free sliding action, due to the fact that all parts of the garment may swing freely in a vertical direction with respect to the common vertical lines of the neutral axis points to which all of the relatively movable parts are attached.

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 elevation of a garment according to the exemplary illustrated embodiment of the invention, disposed in flattened relation, and with the upper brassière portion shown in open position.

Fig. 2 is a rear elevation of the garment, shown in flattened relation, and with the upper brassière portion in closed position.

Fig. 3 is a side elevation in non-flattened relation, that is, substantially in the position for engaging upon the body.

Fig. 4 is a vertical sectional view of the garment in the same position as shown in Fig. 3, and taken along the line 4—4 of Fig. 2.

Fig. 5 is a side elevation showing the garment

as worn, and with the wearer bending over forwardly.

Fig. 6 is a side elevation, on a smaller scale than Fig. 5, showing in full lines the wearer in standing posture, and in dotted lines in backward bending 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 illustrated embodiment of the invention, comprises a back portion consisting of a lower back part 10 and an upper back part 11, the latter having a centrally disposed triangular elastic gusset 12 at its upper edge portion and overlapping at its lower edge portion the upper edge portion of the lower back part 10, the side edges of the upper and lower back parts 10 and 11 being disposed along substantially vertical continuous lines 13—13 at each side, and which extend from the top to the bottom of the garment. These vertical lines intersect the axis of the body engaging parts of the garment which when worn overlie the areas of the body at each side in the region of the waistline, and toward the back, which may be termed neutral axis points, and which constitute areas or spheres about which the other parts of the body move as a center in assuming different postures. The ends of the overlapped edges of the back sections 10 and 11 where they attach to the lines 13—13 are within these axis areas or spheres.

Elastic side portions 14—14 which are stretchable laterally but are non-stretchable vertically, are secured at their rearward edges to the lines 13—13 and extend at their lower ends to the bottom of the lower back part 10 and at their upper edges to points intermediate the upper edge of the lower back part 10 where it connects to the lines 13—13 and the upper edge of the upper back part 11 and which are within the axis areas or spheres. To the forward edges of the elastic side portions 14—14 there are secured along seams 14^a—14^a the vertical side edges of the lower front portion 15, the upper edge of which is continued in upwardly curving relation from the upper edges of the elastic side portions 14—14, and the lower edge is continued in upwardly curved relation from the lower edges of the elastic side portions to a triangular centrally disposed elastic gusset 16 provided in the lower edge of the portion 15. The portion 15 which constitutes the main part of the front of the garment is of such length as to overlie the abdomen and diaphragm of the wearer, and the side portions 14—14 which are vertically coextensive with this portion 15 constitute composite end or side parts thereof.

There are also secured to the lines 13—13 the side edges of the upper brassière portion 17, the upper edge of this portion continuing in upwardly curved relation from the upper edge of the upper back part 11, and the lower edge being connected to the lines 13—13 at points intermediate the upper edge of the lower back part 10 and the lower edge of the upper back portion 11 where these edges connect to the lines 13—13, and which points are also within the neutral axis areas or spheres. The lower part of the brassière portion 17 overlaps the upper part of the main front portion 15 and the side portions 14—14 in overlying telescoping relation, and the concave curvature of the lower edge of the brassière portion is such that pulling strains from the ends will tend to draw the overlapping portion of the brassière section into close conforming relation with the

lower main front portion 15. Triangular gussets 18—18 are provided in the brassière portion 17 in the lower corners at each end where the brassière portion connects to the lines 13—13.

The upper portions of the lines 13—13 are given vertical stability by means of stays 19—19, which are preferably provided in pairs at each side, and extend substantially from the upper edge of the garment to the lower edge of the upper back section 11 where it joints the edges 13—13, the stays being enclosed and secured by covering tapes 20—20 which extend the full length of the lines 13—13. These stiffened portions of the lines 13—13 are within the neutral axis areas or spheres which overlie the corresponding parts of the body, and within which areas or spheres the movable edges of the four main parts of the garment are connected.

The lower back part 10 is preferably constructed of a center panel 10^a and two side panels 10^b—10^b of non-elastic material, stitched together along vertical seams 21—21, preferably substantially midway between the back center line of the garment and the side edges of the back part 10, these seams being stiffened substantially throughout their lengths by stays 22—22 preferably secured in pairs to the inner side of the seams by covering tapes 23—23. A pair of additional single stays 24—24 secured by covering tapes 25—25 are preferably provided in the center panel 10^a in spaced parallel relation to the stays 22—22.

The upper back part 11 is also formed of a center panel 11^a and two side panels 11^b—11^b secured together along vertical seams 26—26 which are between the stays 22—22 and 24—24 of the lower back part 10, and these are also stiffened substantially throughout their lengths by stays 27—27, preferably provided in pairs and secured to the inner sides of the seams by covering tapes 28—28, the offset relation of these stays being such that they do not directly overlie the stays of the lower back part 10 along the overlapping telescoping portions of the upper and lower back parts.

The main lower front portion 15 is preferably formed of five vertically arranged panels of non-elastic material, there being a center panel 15^a, intermediate panels 15^b—15^b, and side panels 15^c—15^c, and which are secured together along vertically extending seams 29—29 and 30—30, these seams being stiffened at their upper portions by means of stays 31—31 and 32—32 preferably provided in pairs, and secured to the inner sides of the seams by covering tapes 33—33 and 34—34, these stays extending from the upper edge of the front portion 15 to points substantially spaced from the lower edge, so that the lower part of the front portion is free to bend in the lap region of the wearer when assuming sitting or bending postures. The center panel 15^a is preferably provided with an inner lining 35 to which a pair of centrally arranged stays 36 are secured, these being disposed between the panel 15^a and the inner lining and corresponding in length to the stays 31 and 33. At one side of the front portion 15 there is provided an opening 37 extending from the upper edge to a point substantially spaced from the lower edge and provided with a zipper type fastening 38, this opening also being preferably provided with hooks 39 and eyes 40, at the respective sides, for preliminarily closing the opening prior to operation of the zipper fastening.

The upper brassière portion 17, comprises a center panel 17^a and intermediate panels 17^b—17^b,

secured together along vertical taped seams 41—41; the upper edges of these panels being arcuately formed and having the cup-formations 17^c—17^c; secured thereto along taped seams 42—42. At one side the outer side edges of the intermediate panel 17^b and the cup formation 17^c are secured by a taped seam 43 to one vertical edge of the side panel 17^d which in turn is secured at its other vertical edge to the line 13 at one side of the upper back part 11. At the other side the side panel 17^d is secured along one vertical edge to the line 13 at the other side of the back part 11 and is provided along its other vertical edge with a fastening tape 44 having eye members 45 for fastening to a fastening tape 46 having hook members 47, and secured along the other side edges of the intermediate panel 17^b and the cup formation 17^c at the other side. As is clear from Fig. 1 the brassière portion may be opened by unfastening the hook and eye fastenings, and in effect is continuously formed with the upper back part 11, so that while the upper back part 11 functions as the upper telescoping part of the back portion of the garment it also completes the body surrounding function of the brassière portion.

Shoulder straps 48—48 are connected between the upper back part 11 and the cup formations 17^c—17^c of the brassière portion, and hose supporters 49 are secured to the lower edge of the garment preferably at the lower ends of the seams 29—29, 30—30 and 13—13.

As shown in full lines in Fig. 6 the garment is in its normal position while in a standing posture. It will be observed that the lower front portion 15 is engaged at its upper part with the diaphragm and at its lower part with the abdomen of the wearer. The brassière portion 17 at its lower part overlaps the upper part of the portion 15, acting as a supporting band around it, and at its lower edge is sufficiently high so that in assuming a sitting or a bending forward posture it can move downwardly as shown by the full line arrow in Fig. 5 without exerting compressive pressure upon the abdomen. The upper edge of the lower portion 15 is spaced downwardly from the bust portion to a sufficient extent so that in bending forwardly as shown in Fig. 5 or in a sitting posture, this edge may move upwardly as shown by the dotted line arrow in Fig. 5 without crowding or exerting compressive pressure upon the bust. At the same time the overlap between the portions 17 and 15 is sufficient to maintain these portions in overlapped relation upon a maximum extension of the body, as for instance when bending backwardly, as shown by the dot and dash lines in Fig. 6.

The upper and lower back portions 11 and 10 have telescoping movement in cooperation with the movements of the front portions, the overlapping parts of the back portion expanding while the overlapping parts of the front portion contract in assuming forward bending or sitting postures, and the back portions contracting while the forward portions expand in assuming a backward bending position. During these movements all of these movable parts move with respect to the common neutral axis lines 13 at each side, there being no intervening non-telescoping portions to restrict the movement or to space the anchoring points about which the movement occurs from the natural neutral axis lines 13. While the upper back portion 11 forms an integrated part of the garment, having the four main movable sections 10, 11, 15 and 17, it also constitutes in effect a back for the brassière portion 17 in lateral

line and substantially coextensive vertically therewith, so that these portions 11 and 17 form a body girding brassière part in which these parts 11 and 17 act together, while at the same time acting cooperatively with the lower back and front portions 10 and 15.

I have illustrated and described a preferred and satisfactory embodiment of the invention, but it will be obvious 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 in combination, a front portion comprising an upper part and a lower part vertically offset and overlapped with respect to each other, and a back portion comprising an upper part and a lower part vertically offset and overlapped with respect to each other, the side edges of the upper and lower parts of said front and back portions being disposed and secured together along a substantially vertically extending non-elastic seam line at each side extending from the top edge to the bottom edge of the garment, and the offset bottom and top edges of said upper and lower parts of said front and back portions extending to said lines and being unattached and free with respect to the underlying and overlying portions of the relatively movable portions of the garment between said lines, said lines constituting relatively fixed anchorage points at each side with respect to which said edges are free to simultaneously move to expand and contract said front and back portions in substantial correspondence with the movements of the front and back portions of the body relatively to a neutral axis point at each side in the region of the waist line, said lines being arranged to coincide with said axis points, and the anchoring points of the lower edges of the front and back upper parts being vertically spaced from each other along said seam lines and the upper edge of the front and back lower parts being vertically spaced from each other along said seam lines.

2. A foundation garment comprising in combination, a front portion comprising an upper part and a lower part vertically offset and overlapped with respect to each other, and a back portion comprising an upper part and a lower part vertically offset and overlapped with respect to each other, the side edges of the upper and lower parts of said front and back portions being disposed and secured together along a substantially vertically extending non-elastic seam line at each side extending from the top edge to the bottom edge of the garment, and the offset bottom and top edges of said upper and lower parts of said front and back portions extending to said lines and being unattached and free with respect to the underlying and overlying portions of the garment between said lines, the connection points being vertically spaced along said seam lines with the connection points of the upper edge of said lower front part nearest the upper end of said lines, followed in vertically spaced succession by the points of connection of the upper edge of the lower back portion, the lower edge of the upper front portion and the lower edge of the upper back portion, said lines constituting relatively fixed anchorage points at each side with respect to which said edges are free to move simultaneously to expand and contract said front and back portions in substantial correspondence with the movements of the front

and back portions of the body relatively to a neutral axis point at each side in the region of the waist line, said lines being arranged to coincide with said axis points.

3. A foundation garment comprising in combination, a vertically expansible and contractable back portion, and a front portion connected at each side of said back portion along vertically fixed lines by non-elastic seams extending from the top edge to the bottom edge of the garment, said front portion comprising a lower part adapted at its upper portion to engage the wearer's diaphragm and at its lower portion to engage the abdomen, and including laterally yieldable elastic end portions vertically co-extensive therewith, and connected along their vertical rearwardly disposed edges to said vertically fixed lines, and an upper brassière part adapted at its upper portion to engage the bust and having a lower portion overlapped exteriorly upon the upper diaphragm engaging portion of said lower part, and the elastic end portions thereof to an extent sufficient to maintain said overlapped relation upon maximum expansion of said front portion, the bottom edge of the upper part being below the top edge of the lower part, the ends of the bottom edge of the upper part and the top edge of the lower part being anchored along said fixed lines in vertically spaced relation one with respect to the other, whereby said ends maintain a substantially constant relation to each other, said bottom and top edges of the respective upper and lower parts being relatively movable and whereby said front portion is adapted to expand and contract in correspondence with the lengthening and shortening of the central front line of the wearer upon assuming standing, sitting, and bending postures.

4. A foundation garment comprising in combination, a vertically expansible and contractable back portion, and a front portion connected at each side to said back portion along vertically fixed lines by non-elastic seams extending from the top edge to the bottom edge of the garment, said front portion comprising a lower part adapted at its upper portion to engage the wearer's diaphragm and at its lower portion to engage the abdomen and including laterally yieldable elastic end portions vertically co-extensive therewith, and connected along their vertical rearwardly disposed edges to said vertically fixed lines, and an upper brassière part adapted at its upper portion to engage the bust and having a lower portion overlapped exteriorly upon the upper diaphragm engaging portion of said lower part and the elastic end portions thereof to an extent sufficient to maintain said overlapped relation upon maximum expansion of said front portion and including laterally yieldable elastic gussets at the ends of its lower edge, the bottom edge of the upper part being below the top edge of the lower part, the ends of the bottom edge of the upper part and the top edge of the lower part being anchored along said fixed lines in vertically spaced relation one with respect to the other, whereby said ends maintain a substantially constant relation to each other, said bottom and top edges of the respective upper and lower parts being relatively movable and whereby said front portion is adapted to expand and contract in correspondence with the lengthening and shortening of the central front line of the wearer upon assuming standing, sitting and bending postures.

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