

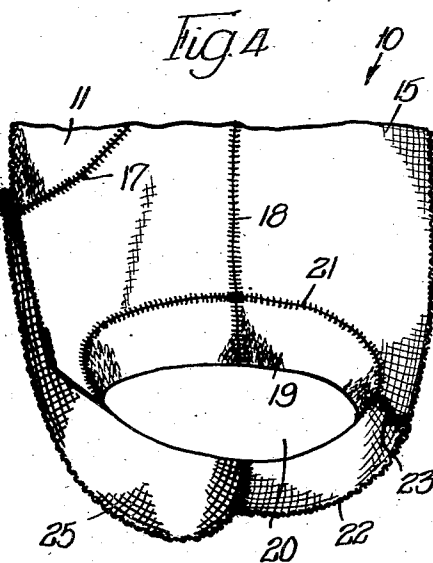
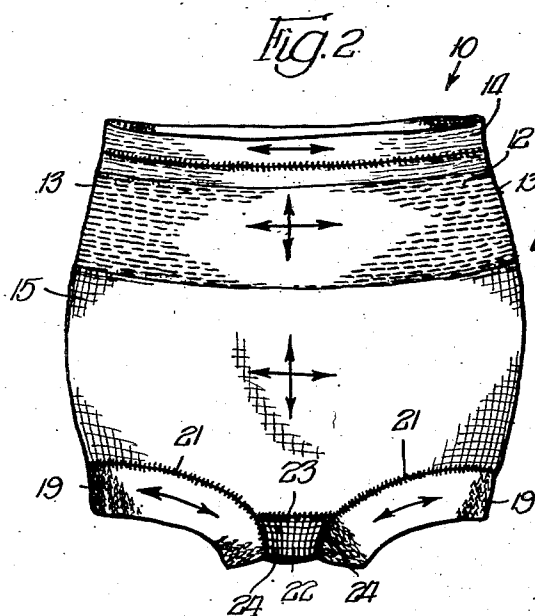
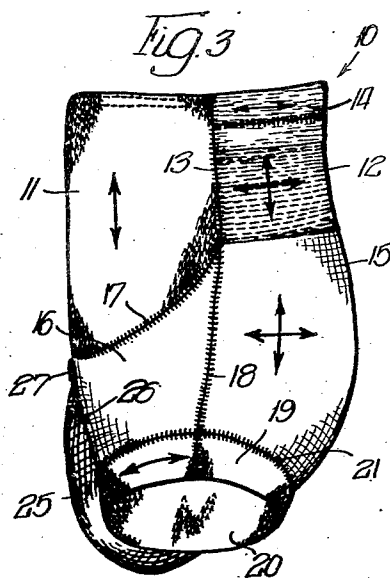
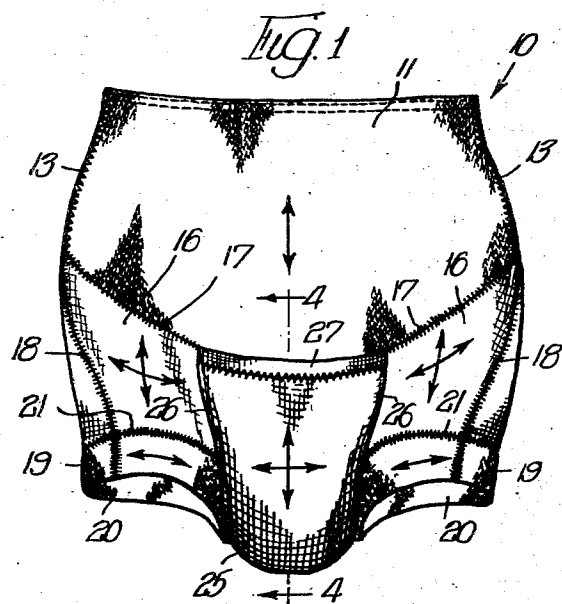
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UNDERGARMENT

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UNDERGARMENT

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1

This invention relates, generally, to undergarments, and it has particular relation to girdle-type undergarments. This application discloses an improvement over the undergarment disclosed in application Serial No. 103,436, filed July 7, 1949.

Among the objects of this invention are: To support firmly and comfortably the abdominal area of the human body; to accomplish this by employing an inextensible front girdle portion overlying the abdominal area with the ends interconnected by an elastic section to fit around the small of the back and apply relatively high tension stress to the girdle portion and thereby support from each side the abdominal body area both upwardly and inwardly; to prevent the front girdle portion and the elastic section from working upwardly of the body; and to provide a lower front girdle portion and a one piece side and back portion attached to the front girdle portion and to the elastic section which are readily and comfortably conformable to the human body in various positions.

Other objects of this invention will, in part, be obvious and in part appear hereinafter.

This invention is disclosed in the embodiment thereof shown in the accompanying drawing, and it comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of this invention reference may be had to the following detailed description, taken together with the accompanying drawing, in which:

Figure 1 is a view, in front elevation, of an undergarment constructed in accordance with this invention, this particular undergarment being in the nature of men's shorts, it being understood, however, that many of the features of construction of the present invention can be employed also in the manufacture of similar women's garments;

Figure 2 is a view, in rear elevation, of the garment shown in Figure 1;

Figure 3 is a view, in side elevation, of the garment shown in Figure 1; and

Figure 4 is a detail sectional view, taken generally along the line 4—4 of Figure 1 and illustrating at an enlarged scale certain details of construction.

Referring now particularly to the drawing, it

2

will be observed that the reference character 10 designates, generally, an undergarment constructed in accordance with this invention. For illustrative purposes a garment of the type of men's shorts has been illustrated but, as pointed out above, a similar garment construction in which the present invention is embodied can be employed in the manufacture of similar women's garments of the girdle and panty girdle type.

As illustrated, the undergarment 10 includes a front girdle portion 11. The front girdle portion 11 is wide enough to extend over the abdominal area and is formed of fabric which is substantially non-stretchable circumferentially of the body and is vertically stretchable. It may be constructed of closely woven fabric incorporating rubber threads which are relatively resistive to stretch but which permit some slight stretch in the vertical direction so as to conform to the body contour. It will be observed that the upper edge of the front girdle portion 11 is substantially horizontal and that the lower edge is generally convex.

It is desirable to apply a relatively high tension stress to the ends of the front girdle portion 11 for the purpose of supporting from each side the abdominal area in both upward and inward directions. For this purpose a tension stress applying side and back portion 12 is employed and is arranged to interconnect the lower portions of the ends of the front girdle portion 11 by being seamed thereto as indicated at 13. The tension stress applying side and back portion has elastic yarn or rubber with relatively more holding power running horizontally or circumferentially of the body than there is in the yarn or rubber running vertically. The material is such that it stresses circumferentially the substantially non-stretchable front girdle portion 11. The tension stress applying side and back portion has sufficient width so that the required amount of elastic yarn or rubber can be incorporated therein to provide the required tension stress on the front girdle portion 11. It is narrow enough so that it fits around the small of the back and yet applies its tension force directly to the ends of the front girdle portion 11.

Knitted integrally to the upper edge of the tension stress applying side and back portion 12 is a top side and back relatively narrow band portion 14 which is formed of fabric that is stretchable circumferentially of the body and is longitudinally substantially non-stretchable. It will be observed that the upper edge of the top side and back portion 14 constitutes a continua-

3

tion of the upper edge of the front girdle portion 11 and that the ends are secured to the upper portions of the ends of the front girdle portion 11 along the seams 13.

Knit integrally with the lower edge of the tension stress applying side and back portion 12 is a lower side and back portion 15. This portion 15 is knit without the horizontal elastic yarn or rubber used for making the tension stress applying side and back portion, and it is readily horizontally and vertically stretchable, there being somewhat more vertical stretch than horizontal stretch. The lower side and back portion is made somewhat wider horizontally than the tension stress applying side and back portion 12 and as a result it is flared outwardly and downwardly so as to conform to and comfortably fit over the buttocks in various body positions. The yarns used vertically and horizontally for knitting the lower side and back portion 15 can be varied as required to produce the desired degrees of stretch in either direction.

Now it will be observed that the tension stress applying side and back portion 12, the top side and back band portion 14 and the lower side and back portion 15 form a one piece back portion which is knitted as such in a suitable knitting machine. Various elastic yarns or rubber are used as described for the purpose of providing the desired degrees of elasticity and also the desired ranges of stretchability in vertical and horizontal or circumferential directions.

Secured to the convex lower edge of the front girdle portion 11 is a lower front girdle portion 16 which is formed preferably of easily stretchable knitted mesh fabric. It is seamed at 17 to the lower edge of the front girdle portion 11 and at 18 at its ends to the juxtaposed sides of the lower side and back portion 15. As shown in Figure 1 of the drawing, the lower front girdle portion 16 has a two-way stretch with its upper edge secured to the convex lower edge of the front girdle portion 11 and its ends, as shown in Figure 3, constituting continuations of the ends of the front girdle portion 11. When the lower front girdle portion 16 is employed as described, the comfort of the wearer is improved particularly since this part of the garment is in contact with the body below the abdomen.

It is desirable to prevent the undergarment 10 from working upwardly on the body. For this purpose elastic tapes or bands 19 are provided and they define leg openings 20. Preferably the tapes or bands 19 are longitudinally stretchable and are vertically substantially non-stretchable. They are seamed at 21 to the lower edges of the lower side and back portion 15 and to the lower edge of the lower front girdle portion 16.

Between the elastic tapes or bands 19 there is provided a crotch portion 22 which may be formed of soft and easily stretchable fabric. The crotch portion 22 is seamed at 23 to the central lower edge portion of the lower side and back portion 15 and at 24 to the elastic tapes or bands 19 which define the leg openings 20. In knitting the crotch portion 22 some rubber is employed for imparting to it the desired degree of resiliency.

Knitted integrally with the forward part of the crotch portion 22 is a suspensory portion 25 so as to form an open knit fabric. The suspensory portion 25 is seamed at 26 to the lower front girdle portion 16 intermediate the ends thereof as illustrated more clearly in Figure 1. At the upper edge of the suspensory portion 25 there is a narrow elastic band 27 which extends along

4

the central portion of the convex lower edge of the front girdle portion 11 and is unattached thereto for the purpose of permitting the suspensory portion 25 to be lowered.

It is important that the lower side and back portion 15 be relatively easily stretchable vertically so as to permit the stress applying side and back portions 12 to remain around the small of the back, particularly when the person assumes the sitting position.

Since certain changes can be made in the foregoing garment construction and different embodiments of the invention can be made without departing from the spirit and scope thereof, it is intended that all matter shown in the accompanying drawing and described hereinbefore shall be interpreted as illustrative and not in a limiting sense.

What is claimed as new is:

1. An undergarment for molding the abdominal body area and embracing the lower side and back body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially non-stretchable and vertically stretchable fabric with the upper edge substantially horizontal and the lower edge generally convex, a lower front portion for overlying the lowermost portion of the abdominal area and formed of two-way readily stretchable fabric with the upper edge secured to said convex lower edge of said front girdle portion and the ends constituting continuations of the ends of said front girdle portion, and a one piece side and back portion comprising a two-way stretch elastic section formed of elastic yarn joining the ends of said front girdle portion and capable of applying circumferentially relatively high tension thereto for applying from the sides support for the abdominal area both upwardly and inwardly, and a two-way readily stretchable lower portion joining the ends of said lower front portion and having its ends flared outwardly and downwardly to conform to and comfortably fit over the buttocks in various body positions.

2. An undergarment for molding the abdominal body area and embracing the lower side and back body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially non-stretchable and vertically stretchable fabric with the upper edge substantially horizontal and the lower edge generally convex, a lower front portion for overlying the lowermost portion of the abdominal area and formed of two-way readily stretchable fabric with the upper edge secured to said convex lower edge of said front girdle portion and the ends constituting continuations of the ends of said front girdle portion, and a one piece side and back portion comprising a two-way stretch elastic section formed of elastic yarn joining the ends of said front girdle portion and capable of applying circumferentially relatively high tension thereto for applying from the sides support for the abdominal area both upwardly and inwardly, and a two-way readily stretchable lower portion joining the ends of said lower front portion and having its upper edge knitted integrally with the lower edge of said elastic section and its ends flared outwardly and downwardly to conform to and comfortably fit over the buttocks in various body positions.

3. An undergarment for molding the abdominal body area and embracing the lower side and

5

back body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially non-stretchable and vertically stretchable fabric with the upper edge substantially horizontal and the lower edge generally convex, a lower front portion for overlying the lowermost portion of the abdominal area and formed of two-way readily stretchable mesh fabric with the upper edge secured to said convex lower edge of said front girdle portion and the ends constituting continuations of the ends of said front girdle portion, and a one piece side and back portion comprising a two-way stretch elastic section formed of elastic yarn joining the lower portions of the ends of said front girdle portion and capable of applying circumferentially relatively high tension thereto for applying from the sides support for the abdominal area both upwardly and inwardly, a one-way longitudinally stretchable band portion joining the upper portions of the ends of said front girdle portion with its lower edge knitted integrally with the upper edge of said elastic section, and a two-way readily stretchable lower portion joining the ends of said lower front portion and having its upper edge knitted integrally with the lower edge of said elastic section and its end flared outwardly and downwardly to conform to and comfortably fit over the buttocks in various body positions.

4. An undergarment for molding the abdominal body area and embracing the lower side and back body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially non-stretchable and vertically stretchable fabric with the upper edge substantially horizontal and the lower edge generally convex, a lower front portion for overlying the lowermost portion of the abdominal area and formed of two-way readily stretchable fabric with the upper edge secured to said convex lower edge of said front girdle portion and the ends constituting continuations of the ends of said front girdle portion; a one piece side and back portion comprising a two-way stretch elastic section formed of elastic yarn joining the lower portions of the ends of said front girdle portion and capable of applying circumferentially relatively high tension thereto for applying from the sides support for the abdominal area both upwardly and inwardly, a one-way longitudinally stretchable band portion joining the upper portions of the ends of said front girdle portion, and a two-way readily stretchable lower portion joining the ends of said lower front portion and having its ends flared outwardly and downwardly to conform to and comfortably fit over the buttocks in various body positions; and a crotch portion joining said lower front portion and said one piece side and back portion.

5. An undergarment for molding the abdominal body area and embracing the lower side and back body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially non-stretchable and vertically stretchable fabric with the upper edge substantially horizontal and the lower edge generally convex, a lower front portion for overlying the lowermost portion of the abdominal area and formed of two-way readily stretchable fabric with the upper edge secured to said convex lower edge of said front girdle portion and the ends

6

constituting continuations of the ends of said front girdle portion; a one piece side and back portion comprising a two-way stretch elastic section formed of elastic yarn joining the lower portions of the ends of said front girdle portion and capable of applying circumferentially relatively high tension thereto for applying from the sides support for the abdominal area both upwardly and inwardly, a one-way longitudinally stretchable band portion joining the upper portions of the ends of said front girdle portion with its lower edge knitted integrally with the upper edge of said elastic section, and a two-way readily stretchable lower portion joining the ends of said lower front portion and having its upper edge knitted integrally with the lower edge of said elastic section and its ends flared outwardly and downwardly to conform to and comfortably fit over the buttocks in various body positions; and a crotch portion joining said lower front portion and said one piece side and back portion.

6. A bifurcated garment for molding the abdominal body area and embracing the side, back and crotch body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially substantially non-stretchable and vertically stretchable material with the upper edge substantially horizontal and the lower edge generally convex, relatively narrow longitudinally stretchable transversely substantially non-stretchable bands defining leg openings, a lower front girdle portion for overlying the lowermost portion of the abdominal area and formed of readily stretchable material with the upper edge secured to said convex lower edge of said upper main front portion and the lower edge near its ends secured to said leg opening defining bands, a one piece side and back portion joining the ends of said front girdle portion and the ends of said lower front portion for overlying the lower side and back body areas with the upper edge substantially horizontal and portions of the lower edge constituting continuations of said lower edge of said lower front portion secured to said leg opening defining bands; the upper portion of said one piece side and back portion including a horizontally extending elastic section for applying circumferentially relatively high tension to said ends of said front girdle portion thereby to apply from the sides support for the abdominal area, both upwardly and inwardly, and the lower portion of said side and back portion below said elastic section being knitted integrally therewith and formed of readily stretchable material to conform readily and closely with the body in either a sitting or a standing position and hold said front girdle portion, and said elastic section against working upwardly of the body; and a crotch portion formed of two-way stretch elastic material and secured at one end to said lower edge of said side and back portion and at the sides to said leg opening defining bands.

7. A bifurcated garment for molding the abdominal body area and embracing the side, back and crotch body areas comprising a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially substantially non-stretchable and vertically stretchable material with the upper edge substantially horizontal and the lower edge generally convex, relatively narrow longitudinally stretchable transversely substantially

7

non-stretchable bands defining leg openings, a lower front girdle portion for overlying the lowermost portion of the abdominal area and formed of readily stretchable material with the upper edge secured to said convex lower edge of said upper main front portion and the lower edge near its ends secured to said leg opening defining bands, a one piece side and back portion joining the ends of said front girdle portion and the ends of said lower front portion for overlying the lower side and back body areas with the upper edges substantially horizontal and portions of the lower edge constituting continuations of said lower edge of said lower front portion secured to said leg opening defining bands; the upper portion of said one piece side and back portion comprising a relatively narrow band portion substantially non-stretchable vertically and readily stretchable horizontally, immediately therebelow and knitted integrally therewith a horizontally extending elastic section for applying circumferentially relatively high tension to said ends of said front girdle portion thereby to apply from the sides support for the abdominal area both upwardly and inwardly, and the lower portion of said side and back portion below said elastic section being knitted integrally therewith and formed of readily stretchable material to conform readily and closely with the body in either a sitting or a standing position and hold said front girdle portion, said narrow band portion, and said elastic section against working upwardly of the body; and a crotch portion formed of two-way stretch elastic material and secured at one end to said lower edge of said side and back portion and at the sides to said leg opening defining bands.

8. A bifurcated garment for molding the abdominal body area and embracing the side, back and crotch body areas comprising, a front girdle portion for overlying and extending substantially to the sides of the abdominal area and formed of circumferentially substantially non-stretchable and vertically stretchable material with the upper edge substantially horizontal and the lower edge generally convex, a lower front girdle portion for overlying the lowermost portion of the abdominal area and formed of readily stretchable mesh material with the upper edge secured to said convex lower edge of said upper main front portion and the lower edge near its ends defining por-

8

tions of leg openings, a one piece side and back portion joining the ends of said front girdle portion and the ends of said lower front portion for overlying the lower side and back body areas with the upper edge substantially horizontal and portions of the lower edge constituting continuations of said lower edge of said lower front portion to define further said leg openings; the upper portion of said one piece side and back portion comprising a relatively narrow band portion substantially non-stretchable vertically and readily stretchable horizontally, immediately therebelow and knitted integrally therewith a horizontally extending elastic section for applying circumferentially relatively high tension to said ends of said front girdle portion thereby to apply from the sides support for the abdominal area both upwardly and inwardly, and the lower portion of said side and back portion below said elastic section being knitted integrally therewith and formed of readily stretchable material to conform readily and closely with the body in either a sitting or standing position and hold said front girdle portion, said narrow band portion, and said elastic section against working upwardly of the body; a loose fitting suspensory pouch portion having the upper parts of its sides secured to intermediate vertical parts of said lower front portion and the lower portions of its sides constituting continuations of said lower edge of said lower front portion to define further said leg openings and the upper edge unattached to the juxtaposed central part of said lower front portion, and a crotch portion formed of two-way stretch elastic material and secured at one end to the lower edge of said pouch portion and at the other end to said lower edge of said one piece side and back portion with the sides constituting continuations of said lower portions of said sides of said pouch portion and of said lower edge of said side and back portion to complete the definition of said leg openings.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
Re. 22,583	Fridolph	Dec. 26, 1944
2,171,913	Bullinger	Sept. 5, 1939