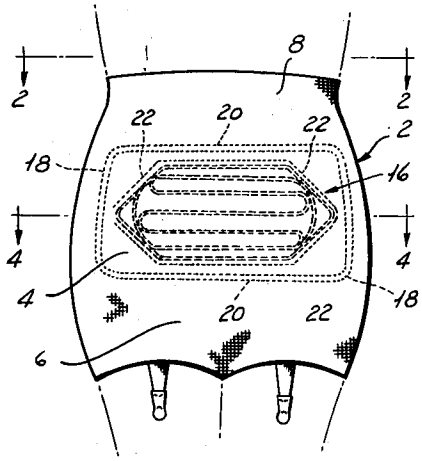
June 27, 1950 A. V. LINDSAY 2,513,034

GIRDLE OR LIKE ARTICLE OF APPAREL

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Fig 1



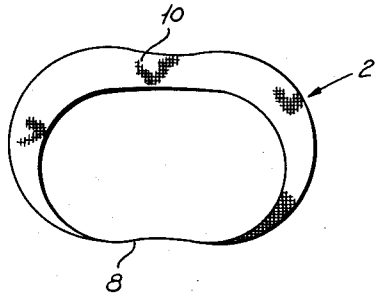
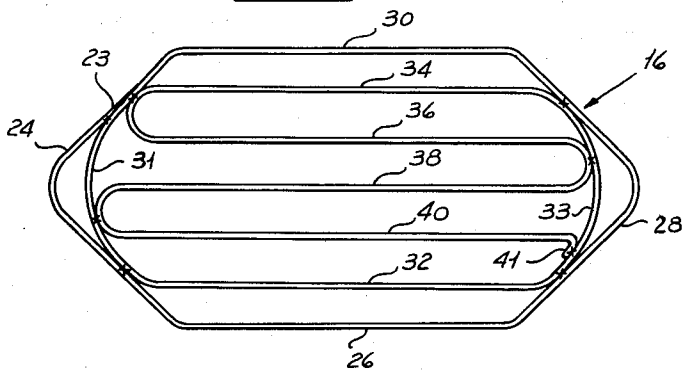


Fig 2

Fig 3



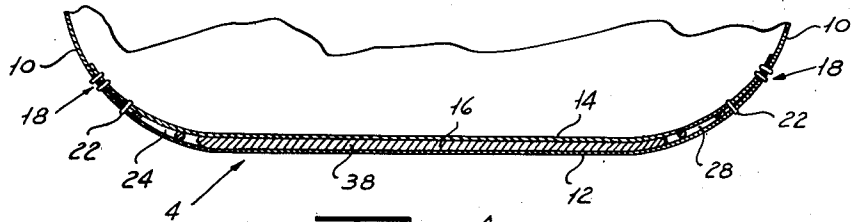


Fig 4

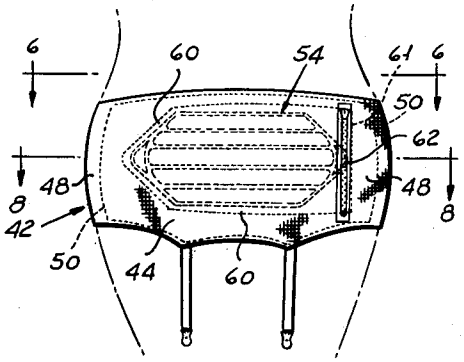
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GIRDLE OR LIKE ARTICLE OF APPAREL

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Fig 5



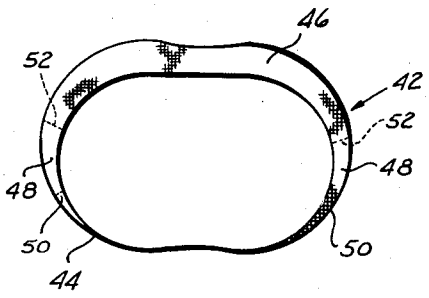
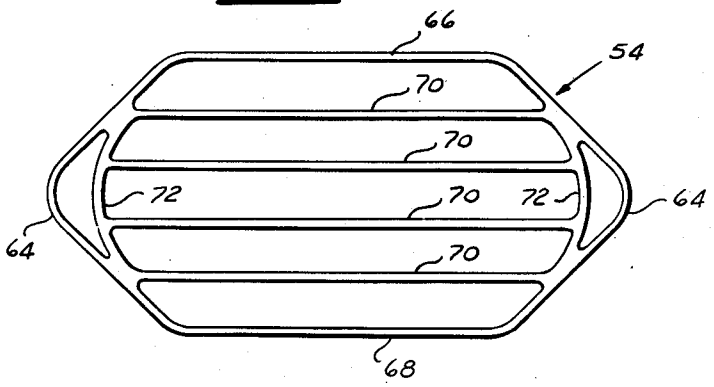


Fig 6

Fig 7



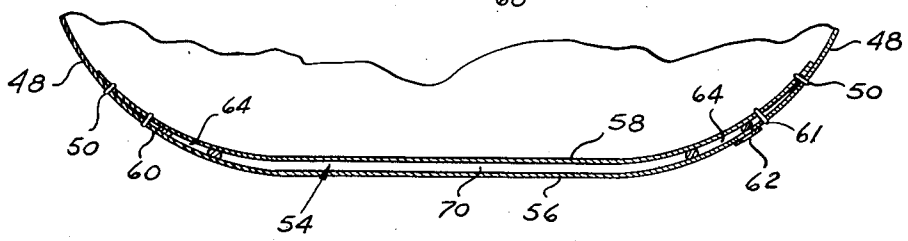


Fig 8

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GIRDLE OR LIKE ARTICLE OF APPAREL

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Application August 20, 1948, Serial No. 45,340

4 Claims. (Cl. 2—36)

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This invention relates to an improved girdle, and to similar articles of apparel, such as corsets and garter belts, such articles of apparel being adapted to restrain the figure and particularly to flatten the abdomen.

The invention has among its objects the provision of an improved girdle or the like having improved abdomen flattening properties while insuring that such article of apparel shall be form fitting and comfortable to the wearer.

The invention has a further object the provision of a girdle or similar article of apparel including a novel reinforcing and stiffening element which insures flatness of the abdomen in a horizontal direction while yielding vertically, as when the wearer of the article sits or bends.

Yet a further object of the invention, in one of the specific embodiments herein described, is the provision of means whereby the reinforcing and stiffening element may be readily removed from the article to facilitate the washing thereof.

These and further objects of the invention will be more readily apparent in the following description of preferred embodiments thereof.

In the drawings appended hereto and forming a part of the specification:

Figure 1 is a view in front elevation of a first embodiment of the invention, shown as a girdle, as it appears when worn;

Figure 2 is a view in plan of such girdle, the view being taken from the line 2—2 in Figure 1;

Figure 3 is a view in front elevation of the reinforcing and stiffening element incorporated in the girdle of the first embodiment;

Figure 4 is a view in horizontal section through the front portion of the girdle, the section being taken along the line 4—4 in Figure 1;

Figure 5 is a view in front elevation of a second embodiment of the invention, shown as a garter belt, as it appears when worn;

Figure 6 is a view in plan of such garter belt, the view being taken from the line 6—6 in Figure 5;

Figure 7 is a view in front elevation of the reinforcing and stiffening element incorporated in the garter belt, and

Figure 8 is a view in horizontal section through the front portion of the garter belt, the section being taken along the line 8—8 in Figure 5.

Figures 1 to 4, inclusive, as above pointed out, illustrate a girdle embodying the present invention. Figures 5 to 8, inclusive, show a garter belt embodying alternative features of the invention. In Figures 1 to 4, inclusive, the girdle designated generally by the reference character 2 typifies

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the garment to which my invention may be applied. The main body portion of girdle 2 may be made of all elastic material, or it may be made of material which is partly elastic and partly inelastic. Also, it may be made in the form of a seamless tube, or it may be made of several sections of suitable material secured together in any well known manner. As usual, where a 1-way stretch material is employed, the girdle will be made so that the direction of stretch will be horizontal, and, in the case of 2-way stretch fabric, the girdle will also stretch in a vertical direction.

Conventional girdles, especially when made of so-called 2-way stretch material, fit closely the contour of the body, and permit the stomach and abdomen to assume a rounded contour, especially when the wearer is bending over or sitting down. It is highly desirable that the stomach and abdomen be maintained in flat condition and this cannot be accomplished by the conventional girdle.

In the particular embodiment herein first shown, girdle 2 has an abdomen covering front panel portion 4 inserted in the otherwise integral girdle body. In this instance, the girdle main body is preferably formed of 1-way elastic fabric, well known in corset and girdle art, the panel 4 being made of relatively inelastic fabric. The part of the main girdle body at the front and below the panel 4 is designated 6 and that at the front and above said panel is designated 8. The rear and side portions of the main girdle body are denoted by the reference character 10.

Panel 4, as is more clearly evident in Figure 4, is made up of a front ply 12 and a rear ply 14, such plies forming between them a pocket receiving the integral reinforcing and stiffening element which is generally designated 16. Panel 4 is attached to the main body of the girdle by the stitching 18 at the sides of the panel and the stitching 20 at the top and bottom thereof, such stitching being shown as of the double row type. The reinforcing element 16 is positioned symmetrically within panel 4 and is retained therein by the stitching 22 which surrounds it as shown in Figure 1. Whereas stitching 22 may closely surround element 16 if desired, in the preferred embodiment shown stitching 22 is spaced somewhat from element 16 at both of the sides and also at the top and bottom, to allow the element 16 to shift at least slightly vertically, horizontally, and angularly, and to elongate to some extent as a result of vertical compression of element 16 upon bending of the wearer of the girdle.

Reinforcing element 16 in this embodiment is in the form of an integral grid of elongated generally hexagonal shape, the grid being symmetrical about its horizontal and vertical central axes. As shown in Fig. 3, element 16 has a length, measured horizontally, which is approximately twice its width, measured vertically. Grid 16 is made up from a length of springy elongated material such as wire. It is preferred to employ for this purpose springy, non-corrodible, materials, such as stainless steel and Phosphor bronze, in order to eliminate corrosion or rusting of the element and consequent damage to the girdle, although it is possible to use plain carbon steel spring wire in making such element, preferably provided with a corrosion resistant coating.

One end of the wire forming element 16 is at point 23, whence it travels to form the partial end loop 24, thence downwardly to form the horizontal run or bar 26, thence upwardly to form the partially closed end loop 28, across to form the top horizontal run or bar 30, down to form the inner loop 31, horizontally to form run 32, upwardly to form inner loop 33, and thence repeatedly across, as shown, between such inner loops to form the inner horizontal runs 34, 36, 38, and 40. The wire terminates at point 41. Such grid structure is made integral by securing the wires together, as shown, at the places where they adjoin, as by spot welding.

Reinforcing element 16, when subjected to compression in a vertical direction, will yield to some extent particularly in its runs or bars 26 and 30. If such compression is distributed over the top and bottom bars or runs of the grid, there will be some resulting elongation of the grid. Because the pocket formed by stitching 22 is, in the embodiment shown, made sufficiently long and high, substantially no restriction is imposed by said pocket on the grid against such changes in shape in the latter occasioned by bending or twisting of the torso of the wearer. Thus the element 16 when so incorporated in the girdle yields to adapt itself to changes in body contour while maintaining the abdomen substantially flat. Element 16 is made to taper in section at its ends, as shown in Figure 4, and also to curve at such ends, so that it both conforms to the shape of the body of the wearer and is more easily distortable at such ends than in its central portion.

The garter belt shown in Figures 5 to 8, inclusive, is designated generally by the reference character 42. Such garter belt has a front panel designated 44 and a rear panel 46, both such panels in this embodiment being made of relatively inelastic textile material, such panels being joined by the vertical elastic side panels 48, such last named panels being joined to the front panel by rows of stitching 50 and to the rear panel by rows of stitching 52.

Incorporated within the front panel 44 of the garter belt is a reinforcing and stiffening element generally designated 54, which is retained in a pocket formed between the outer ply 56 and the inner ply 58 of the front panel, as shown in Figure 8. The pocket in the panel is formed by the stitching 60 which relatively closely adjoins element 54 along its top, its bottom, and its left-hand end, as shown in Figure 5. The pocket is completed by means of the vertical stitching 61 between plies, at the right (Figs. 5 and 8) and by the fastener 62 closing a vertical opening at the left of stitching 61. The fastener 62 shown is of the slidable fastener or "zipper" type. The stitching 60 at the top and bottom of the pocket is spaced sufficiently at the opening closed by fastener 62, and the opening at the fastener is of such length vertically of the garter belt, that element 54 may be inserted into the pocket and withdrawn therefrom when the fastener is open. The right-hand end of the pocket, formed by stitching 61, lies sufficiently close to the right-hand end of element 54 when the fastener is closed that undue lateral shifting of such element in the pocket is prevented.

The reinforcing and stiffening element 54 in this embodiment takes the form of an integral molded grid. Such grid may be made of various well known plastic materials of which cellulose acetate, cellulose acetate butyrate, and ethyl cellulose are typical. Such grid, which has the horizontally curved loop ends 64, has a series of spaced horizontal bar portions, the top one of which is designated 66 and the bottom one of which is designated 68. Intermediate horizontal bars are indicated at 70, such bars being attached to the inner loop members 72 within the grid. As shown in Fig. 7, element 54 has a length, measured horizontally, which is approximately twice its width, measured vertically.

The garter belt of the second embodiment functions to restrain the figure and to flatten the abdomen in the same manner as the girdle of the first embodiment. Grid 54, while remaining substantially flat in its longitudinal center portion, is yieldable vertically, particularly at the center portions of bars 66 and 68, and, to a certain extent, may also elongate. The pocket formed in the front panel by means of stitchings 60, 61, and the separable fastener 62 insures the maintenance of the reinforcing grid over the abdomen but allows its elongation to a certain extent and allows it to shift angularly somewhat, so that the belt restrains the figure and flattens the abdomen while insuring comfort to the wearer.

Whereas, I have shown and described preferred embodiments of my invention, as incorporated in a girdle and in a garter belt, it is to be understood that the invention may be used to advantage in other types of figure-restraining garments. It is also to be understood that the invention is not confined to the particular embodiments shown, since it is capable of considerable variation as to details. The invention is therefore defined by the scope of the appended claims.

I claim as new the following:

1. A body embracing article of apparel for restraining and flattening the figure comprising a main body portion which is elastic in a horizontal direction circumferentially of the article, said main body portion having a front area adapted to cover the abdominal region of the wearer, and means for horizontally stiffening the front abdominal area of the article of apparel against bulging, said stiffening means comprising an integral reinforcing and stiffening grid located in said front area of the main body portion, the grid being elongated horizontally and substantially symmetrical about its central horizontal and vertical axes, the grid having a length, measured horizontally, which is markedly greater than its width, measured vertically, the grid having spaced bars extending circumferentially of the article of apparel, the bars being connected at their respective ends by generally vertically extending end members, the grid having reversely tapered ends, the front area of the article of ap-

parel being composed of a plurality of plies of material, a pocket receiving the grid formed between the plies of such material, the pocket generally conforming in size and shape to the grid, one side of the pocket having an opening to introduce therethrough the grid into the article of apparel, the opening being provided with a fastener means to close it along its length, the grid being flexible and resilient whereby it may yield in the pocket horizontally and vertically with the body of the wearer while maintaining the abdomen of the wearer substantially flat.

2. A body embracing article of apparel for restraining and flattening the figure comprising a main body portion which is elastic in a horizontal direction circumferentially of the article, said main body portion having a front area adapted to cover the abdominal region of the wearer, and means for horizontally stiffening the front abdominal area of the article of apparel against bulging, said stiffening means comprising an integral reinforcing and stiffening grid located in said front area of the body portion, the grid being in the shape of a hexagon elongated horizontally and substantially symmetrical about its central horizontal and vertical axes, the grid having a length, measured horizontally, which is markedly greater than its width, measured vertically, the grid having spaced bars extending circumferentially of the article of apparel, the bars being connected at their respective ends by generally vertically extending end members, the grid having reversely tapered ends, the front area of the article of apparel being composed of a plurality of plies of material, a pocket receiving the grid formed between the plies of such material, the pocket generally conforming in shape to the grid but being at least slightly larger than the grid, the grid being flexible and resilient whereby it may yield in the pocket horizontally and vertically with the body of the wearer while maintaining the abdomen of the wearer substantially flat.

3. A body embracing article of apparel for restraining and flattening the figure comprising a body portion which is elastic in a horizontal direction circumferentially the article, said main body portion having a front area adapted to cover the abdominal region of the wearer, and means for horizontally stiffening the front abdominal area of the article of apparel against bulging, said stiffening means comprising an integral reinforcing and stiffening grid located in said front area of the main body portion, the grid being elongated horizontally and substantially symmetrical about its central horizontal and vertical axes, the grid having a length, measured horizontally, which is markedly greater than its width, measured vertically, the grid having spaced bars extending circumferentially of the article of apparel, the bars being connected at their ends, said spaced bars including a bar forming the top of the grid, the upper surface of the top of the grid being smooth, the front area of the article of apparel being composed of a plurality of plies of material, a pocket receiving the grid formed between the plies of such material, said pocket generally conforming in size and shape to the grid, the grid being flexible and resilient whereby it may yield in the pocket horizontally and vertically with the body of the wearer while maintaining the abdomen of the wearer substantially flat.

4. A body embracing article of apparel for restraining and flattening the figure comprising a main body portion which is elastic in a horizontal direction circumferentially of the article, said main body portion having a front area adapted to cover the abdominal region of the wearer, and means for horizontally stiffening the front abdominal area of the article of apparel against bulging, said stiffening means comprising an integral reinforcing and stiffening grid located in said front area of the body portion, the grid being in the shape of a hexagon elongated horizontally and symmetrical about its central horizontal and vertical axes, the grid having a length, measured horizontally, which is markedly greater than its width, measured vertically, the grid having spaced bars extending circumferentially of the article of apparel, the bars being connected at their respective ends by generally vertically extending end members, said spaced bars including bars forming the top and bottom, respectively, of the grid, the upper surface of the top and the lower surface of the bottom of the grid being smooth, the front area of the article of apparel being composed of a plurality of plies of material, a pocket receiving the grid formed between the plies of such material, the pocket generally conforming in shape to the grid but being at least slightly larger than the grid, the grid being flexible and resilient whereby it may yield in the pocket horizontally and vertically with the body of the wearer while maintaining the abdomen of the wearer substantially flat.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
882,412	Parker	Mar. 17, 1908
1,606,709	Lancaster	Nov. 9, 1926
1,693,030	Greenberg	Nov. 27, 1928
1,822,477	Caple	Sept. 8, 1931
2,139,305	Friend	Dec. 6, 1938
2,468,106	Polk et al.	Apr. 26, 1949
2,489,388	Rubin	Nov. 29, 1949

FOREIGN PATENTS

Number	Country	Date
369,204	Great Britain	Mar. 11, 1932