

Nov. 23, 1971

M. R. WILLIAMS

3,621,849

THERAPEUTIC GARMENT FOR MATERNITY USE

Filed Oct. 13, 1969

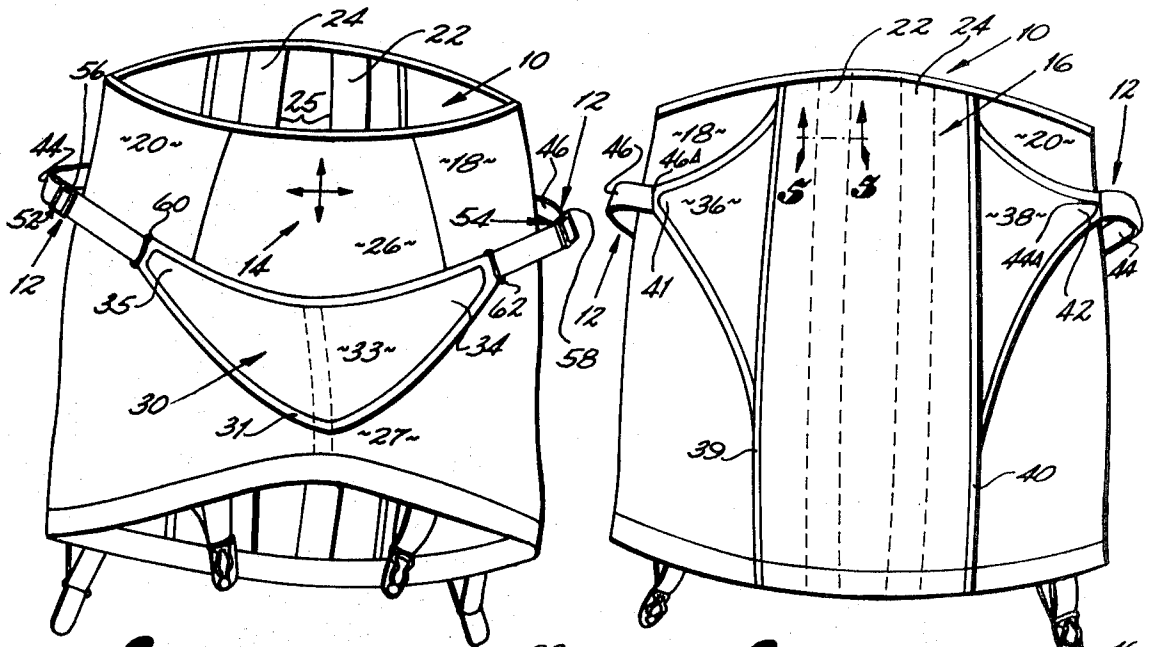


Fig. 1

Fig. 2

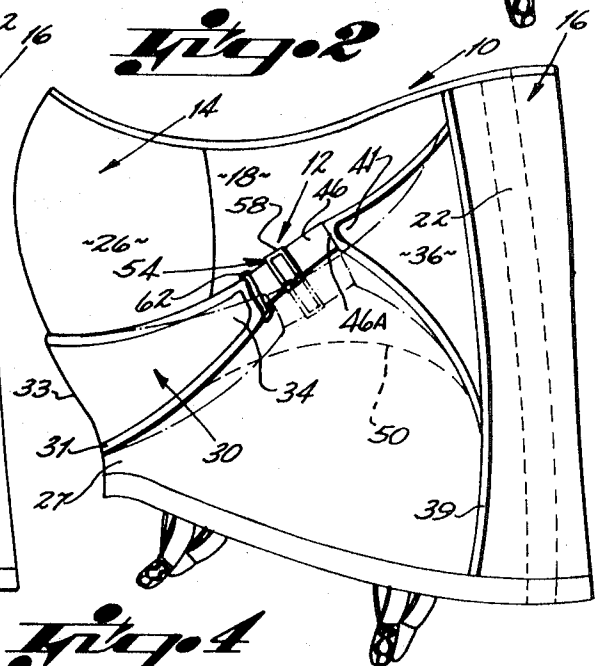
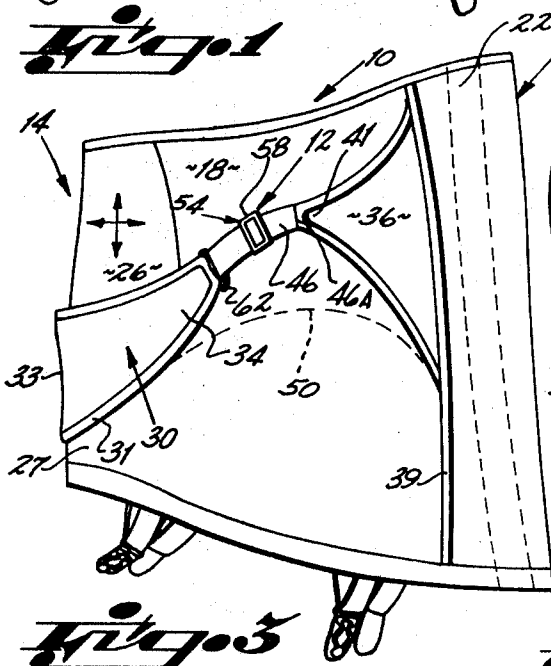
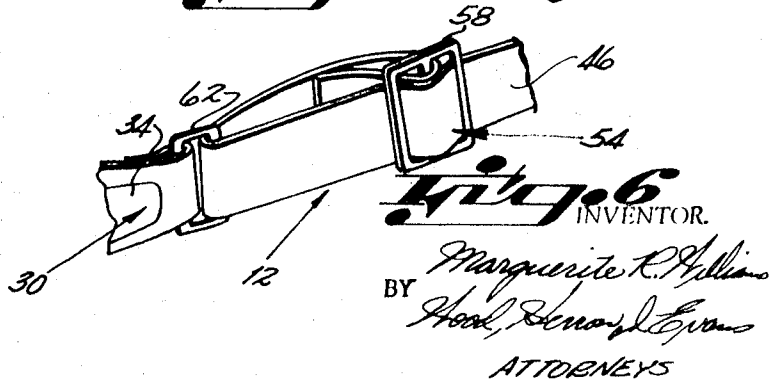


Fig. 3

Fig. 4



Fig. 5



INVENTOR.  
BY *Marguerite R. Williams*  
*Frank S. Evans*  
ATTORNEYS

1

3,621,849  
THERAPEUTIC GARMENT FOR MATERNITY USE  
Marguerite R. Williams, Trumbull, Conn., assignor to  
Surgical Appliance Industries, Inc., Cincinnati, Ohio  
Filed Oct. 13, 1969, Ser. No. 865,887  
Int. Cl. A41c 1/08  
U.S. Cl. 128—579

3 Claims

## ABSTRACT OF THE DISCLOSURE

A therapeutic garment for maternity use including contiguous front, rear, and opposite left and right side panels adapted in use to encircle the trunk of a pregnant user having a distended or enlarged abdominal region; an elastic support panel secured to and overlying the front panel and having tapered ends terminating adjacent the right and left side panels; right and left triangular anchor panels having their respective base edges vertically disposed and secured to the back panel and their opposite free ends or apexes terminating adjacent the left and right side panels at a point higher than the ends of the anchor and support panels, whereby a maternity garment is provided which without structural modification comfortably accommodates users having wide, narrow, high or low hips, does not bind or cut the user when worn, provides a smooth, unrumpled or ungathered appearance, and provides adequate abdominal support throughout all stages of pregnancy.

This invention relates to therapeutic garments, and more particularly to therapeutic garments of the maternity type adapted to be worn by pregnant women for providing abdominal support.

Maternity garments, or corsets, of the type adapted to provide abdominal support have existed for many years and have taken many forms. Typically such garments, which are body encircling and adapted to embrace the trunk of the wearer, include a front section of relatively highly elastic two-way stretch material for accommodating the abdominal distension or enlargement characteristic of pregnant women, a rear panel, and opposite side panels interconnecting the front and rear panels. To provide some measure of support for the pregnancy-induced abdominal enlargement, the maternity corsets of the prior art have typically included one or more auxiliary front support panels. Generally, the auxiliary front panels take the form of elongated elastic webs or bands which underlie the highly elastic front panel and have their opposite ends secured or anchored to the side panels. If only one such auxiliary web is provided, the web is typically horizontal, spanning the lower portion of the front panel, whereas if two such webs are included, the webs are arranged in criss-cross fashion.

The prior art maternity corsets have suffered from a number of defects. For example, in the prior art corsets the auxiliary support panels underlie the main front panel, and because of this relationship to the front panel, have a tendency to bunch or roll as the garment is being positioned in place about the wearer's body. Specifically, as the garment is pulled upwardly about the wearer's trunk, the upper edge or margin of the generally horizontally extending auxiliary support web has a tendency, because of the relative frictional engagement between it and the abdomen of the wearer, to roll or bunch, rendering the garment uncomfortable as well as unattractive. To unroll the auxiliary support, and thereby correct the situation, the wearer must reach down between the elastic front panel and the abdomen and manipulate the web. This is often not easily done, particularly in the latter stages of pregnancy when the abdominal enlargement is con-

2

siderable, because the front panel which covers the auxiliary web is drawn rather tight making access to the auxiliary web difficult. Compounding the problem in the latter stages of pregnancy is the fact that the wearer is often unable to actually see the auxiliary support, which underlies the abdominal enlargement, while attempting to unroll it due to the considerable extent to which the enlarged abdomen projects into the line of sight, obscuring the auxiliary web from the wearer.

Another problem of the prior art maternity corset proposals is that many have failed to provide means for adjusting the garment to accommodate the increasing degrees of abdominal enlargement found in successive stages of pregnancy. Without such adjustment means, the garment must be designed to comfortably fit in all stages of pregnancy. Unfortunately, however, when a garment is designed to comfortably fit a user in advanced stages of pregnancy, the same garment without adjustment means does not provide satisfactory or meaningful abdominal support to the same user during initial stages of pregnancy. Thus, without the provision of adjustment means, the maternity corset is unable to provide proper support at all stages of pregnancy.

It has been an objective of this invention to provide a maternity corset having simple and effective adjustment means for enabling proper abdominal support to be provided throughout all stages of the pregnancy, and which obviates the prior art auxiliary web rolling or bunching problem.

This objective has been accomplished in accordance with certain principles of this invention by providing, in a garment having interconnecting front, rear and opposite side panels, very novel and unobvious adjustable auxiliary support means which include an auxiliary support panel overlying the front panel and having tapered ends terminating adjacent the side panels, an anchor panel connected to the rear panel and having tapered opposite ends terminating adjacent the side panels at a point above the ends of the support panel, and a pair of narrow adjustable length inelastic straps connecting the adjacent ends of the auxiliary support and anchor panels. In accordance with this invention, wherein the auxiliary support panel overlies the highly elastic front panel, as the garment is moved into position about the wearer's body the upper edge or margin of the auxiliary panel not in direct contact with the user's abdominal region, and, hence, does not roll or gather. Additionally, because the strap interconnecting the anchor and auxiliary panels is adjustable in length, the auxiliary panel can be made to provide proper abdominal support throughout all stages of pregnancy.

In addition to the foregoing, certain other advantages exist. For example, because the ends of the auxiliary support and anchor panels and the adjustable interconnecting strap are tapered and narrow, they have a small vertical dimension at a point adjacent the sides of the wearer's body. Being narrow in this region, the adjustable auxiliary support means does not cut or bind when the wearer assumes a sitting position. Another advantage is that the anchor panel, while narrow at the point where it connects to the adjustment straps, is not narrow at the point where it is secured to the back panel, the vertical dimension of the anchor panels at this point being rather substantial. By virtue of this substantial vertical dimension of the anchor panel at the point where it is secured to the back panel, the force applied to the anchor panel, as a consequence of the support given the abdomen by the auxiliary panel, can be distributed to the back panel over a substantial length with the result that the force is evenly distributed over the entire back panel. Finally, due to the nature of the tapered anchor and auxiliary support panels, the interconnecting adjustment straps can assume dif-

3

ferent vertical positions relative to the side panels, thereby accommodating, without structural modification of the corset, users having wide, narrow, high or low hips.

These and other advantages and objectives of the invention will become more readily apparent from a detailed description of a preferred embodiment taken in conjunction with a description of the drawings in which:

FIG. 1 is a front elevational view of a preferred embodiment of the maternity corset.

FIG. 2 is a rear elevational view of the corset.

FIG. 3 is a side elevational view of the corset showing the relationship of the tapered ends of the support and anchor panels and the narrow adjustment strap.

FIG. 4 is a side elevational view of the corset in use.

FIG. 5 is a cross-sectional view taken along lines 5—5 of FIG. 2.

FIG. 6 is a perspective view of the adjustment strap.

A preferred embodiment of the maternity corset incorporating the principles of this invention is depicted in FIGS. 1-4. As shown in these figures, the maternity corset is generally tubular or body encircling in shape, having a tubular or cylindrical composite of panels or sections 10 and an adjustable auxiliary support means 12 located exteriorly of the composite 10. The tubular panel composite 10 includes a front 14, a rear or back 16, an opposite right and left side 18 and 20 interconnecting the front and rear. The back or rear 16 is preferably fabricated of inelastic material although two-way stretch material or one-way stretch material extensive in either a horizontal or vertical direction can be used. The back section 16 includes a pair of horizontally spaced, vertically disposed stays 22 and 24. The stays 22 and 24 are preferably fabricated of stiff metallic band material and are maintained properly positioned by suitable fabric casings 25 which completely enclose the stays and which are stitched or sewn to the inner surface of the back section or panel 16. The stays 22 and 24 provide stiffness to the back 16 for enhancing the support provided by the garment to the lower back region of the wearer. The left and right sides 18 and 20 of the garment and the front 14 except for an insert 26 to be described, are preferably fabricated of moderately elastic two-way stretch material. The insert 26 in the front 14 is fabricated of two-way stretch material having a very high and greater degree of elasticity in the vertical direction. The insert 26 is dimensioned and configured such that in use the insert 26 is substantially co-extensive with the wearer's abdominal enlargement occasioned by pregnancy. (See FIG. 4.) Thus, when the garment is properly positioned about the wearer's trunk, as shown in FIG. 4, the highly elastic insert 26 embraces the enlarged abdominal region, with the less elastic region 27 of the front 14 located beneath the insert 26 disposed below the abdominal enlargement.

The adjustable auxiliary support means 12 of the garment includes an abdominal support section or panel 30, which is disposed to overlie the lower portion of the insert 26. The abdominal support section 30 is secured to the front 14 of the garment, preferably by stitching that portion 31 of its lower edge which is co-extensive with the lower edge of the insert 26 to the upper edge of the front section 27. The abdominal support section 30 has tapered opposite left and right ends 34 and 35. The tapered ends 34 and 35 are generally directed toward the sides 18 and 20 and angled upwardly to the horizontal at an angle of approximately 45°. In use, the central portion 33 of the abdominal support section 30 is adapted to underlie and support the lower portion of the wearer's pregnancy-induced abdominal enlargement.

The adjustable auxiliary support means 12 further includes an anchor means comprising left and right triangular sections 36 and 38. The triangular sections 36 and 38 each have a base edge 39 and 40 secured, for example by stitching, to the opposite vertical side edges of the back panel 16, and tapered ends or apexes 41 and 42. The anchor sections 36 and 38 overlie the sides 18 and 20 of

4

the corset, with the ends or apexes 41 and 42 terminating approximately midway between front 14 and back 16. Further, the anchor panels 36 and 38 positioned such that the tapered ends 41 and 42 thereof are located above, or higher, relative to the tapered ends 34 and 35 of the abdominal support section 30. Location of the tapered ends 41 and 42 above or higher than the tapered ends 34 and 35 causes the force applied to the abdominal support section 30 by straps 44 and 46 to be described, to be directed in a generally laterally and upwardly direction, such as approximately 45° to the horizontal. As shown in FIG. 4, which depicts the orientation of the abdominal support section 30, when the garment is worn by the user, the application of force to the ends 34 and 35 of the abdominal support section 30, the anchor panels 36 and 38 via the straps 44 and 46 is along a direction of 45° to the horizontal, affording comfortable and proper support for the lower region of the wearer's enlarged abdomen.

The adjustable auxiliary support means 12, as indicated, includes right and left straps 44 and 46. The strap 44 interconnects the end 42 of the right anchor panel 38 and the end 35 of the abdominal support section 30, while the left strap 46 interconnects the end 41 of the left anchor panel 36 and the end 34 of the abdominal support section 30. The straps 44 and 46 are relatively narrow, having a very small dimension in the vertical direction. With the straps 44 and 46 so dimensioned, and the ends 34, 35 and 41, 42 of the support section 30 and the anchor section 36, 38 tapered, the adjustable auxiliary support 12 does not cut the wearer along an imaginary line 50 which would otherwise occur were the strap and ends differently configured such as made wider.

The straps 44 and 46 are provided with suitable adjustment means 52 and 54 to facilitate lengthening or shortening of the straps 44 and 46. The adjustment means 52 and 54 in a preferred form may constitute clips 56, 58 which are slideable to different positions along the length of their respective straps whereat they are frictionally held in normal use. To the clips 56 and 58 are secured the free ends 44A and 46A of the straps 44 and 46, after having been passed through metal rings 60 and 62 secured to the ends 34 and 35 of the abdominal support section 30 and folded back upon themselves. In operation when the metal clips 56, 58 are slid along the length of the straps 44, 46 by the user, the ends 44A, 46A of the straps are moved toward or away from the rings 60, 62 lengthening or shortening the straps. This provides, in a simple manner, the desired adjustment in the corset for accommodating and providing adequate support to the user's abdomen during successive stages of pregnancy wherein the abdominal enlargement is increasing in size.

It is essential that the straps 44 and 46 be fabricated of material having substantially no elasticity. For reasons described earlier, namely, to avoid cutting the wearer when in a sitting position, the straps 44 and 46 must necessarily be narrow. Being narrow, if the straps 44 and 46 are not relatively inelastic, they will extend unduly, making adjustment of the auxiliary support panel 30 difficult.

An important advantage provided by the corset of this invention is the ability of the garment to be comfortably worn by women regardless of the location of their hips. For example, the corset of this invention can be worn equally well and without discomfort by women having high, low, wide and narrow hips. The manner in which the corset of this invention accommodates users regardless of hip location is illustrated in FIG. 4. With reference to FIG. 4, it is noted that the strap 46 can assume different vertical positions relative to the side panel 18, depending on the hip location of the wearer. In the solid line position the strap 46 is in a relatively high vertical position to accommodate wearers having one hip location, whereas in the dotted line position the strap 46 is in a relatively

5

low position to accommodate wearers having a different hip location. With the strap 46 capable of varying vertical positions relative to the panel 18, different wearers having different hip positions can properly locate the strap 46 to positions of comfort with respect to their own particular hip location. The ability of the strap 46 to shift vertically is attributed to the fact that the tapered ends 34 and 35, and 40 and 41 of the abdominal panel 30 and the anchor panel 36, respectively, can move in an arcuate manner, i.e., pivot or swivel, relative to the lines 31 and 39 at which they are secured to the corset panels 27 and 16.

Having described the invention, what is claimed is:

1. A therapeutic garment adapted to be worn about the trunk only of a pregnant woman having a distended abdominal region, said garment comprising:

interconnected back, front and opposite right and left side sections configured to enclose the entire trunk only of the wearer, substantially the entirety of said front section being relatively highly elastic to conform to differently sized abdominal enlargements found in successive stages of pregnancy,

an elastic abdominal support panel overlying said front section and having a lower edge and tapered opposite right and left ends terminating adjacent said right and left side sections, respectively, said elasticity of said support panel being substantially less than the elasticity of said front panel, said support panel being connected only along its lower edge to said front section,

an anchor panel secured to said back section and having tapered opposite right and left ends terminating adjacent said right and left side sections, respectively, and

selectively variable length right and left narrow inelastic straps overlying said right and left side sections, respectively, said right strap interconnecting the right tapered ends of both said anchor and support panels, and said left strap interconnecting the left tapered ends of both said anchor and support panels.

2. A therapeutic garment adapted to be worn about the trunk only of a pregnant woman having a distended abdominal region, said garment comprising:

interconnected back, front and opposite right and left side sections configured to enclose the entire trunk only of the wearer, substantially the entirety of said front section being relatively highly elastic to conform to differently sized abdominal enlargements found in successive stages of pregnancy,

an elastic abdominal support panel overlying said front section and having a lower edge and laterally and upwardly extending tapered opposite right and left ends terminating adjacent said right and left side sections, respectively, said elasticity of said support panel being substantially less than the elasticity of said front panel, said support panel being connected only along its lower edge to said front section,

an anchor panel secured to said back section and having downwardly and laterally extending tapered opposite

6

right and left ends terminating adjacent said right and left side sections, and

right and left selectively variable length narrow inelastic straps overlying said right and left side sections, respectively, said right strap angled upwardly and rearwardly and interconnecting the right tapered ends of both said anchor and support panels, and said left strap angled upwardly and rearwardly and interconnecting the left tapered ends of both said anchor and support panels.

3. A therapeutic garment adapted to be worn about the trunk only of a pregnant woman having a distended abdominal region, said garment comprising:

interconnected back, front and opposite right and left side sections configured to enclose the entire trunk only of the wearer, substantially the entirety of said front section being relatively highly elastic to conform to differently sized abdominal enlargements found in successive stages of pregnancy,

an elastic abdominal support panel overlying said front section and having a lower edge and tapered opposite right and left ends terminating adjacent said right and left side sections, respectively, said elasticity of said support panel being substantially less than the elasticity of said front panel, said support panel being connected only along its lower edge to said front section,

right and left triangular anchor panels each having a vertical base edge and opposite apex, said vertical base edges being secured to said back section, said right and left apexes terminating adjacent said right and left side sections at points higher than said right and left tapered ends of said abdominal support panel, and

right and left selectively adjustable narrow inelastic straps overlying said right and left side sections, respectively, said right strap connected between the apex of said right anchor panel and the right end of said support panel, said left strap connected between the apex of said left anchor panel and the left end of said support panel.

#### References Cited

##### UNITED STATES PATENTS

171,012	12/1875	Griswold	-----	128-579	X
D. 190,575	6/1961	Sheldon	-----	128-546	X
1,736,128	11/1929	Pease	-----	128-579	X
2,351,296	6/1944	Schubert	-----	128-547	
2,981,258	4/1961	Moellendorf	-----	128-579	X

##### FOREIGN PATENTS

449,420	9/1927	Germany	-----	128-579	
---------	--------	---------	-------	---------	--

ROBERT W. MICHELL, Primary Examiner

J. H. WOLFF, Assistant Examiner

U.S. Cl. X.R.

128-539, 547, 553