

Aug. 13, 1968

T. A. FOX
SURGICAL GIRDLE

3,396,730

Filed Nov. 15, 1967

2 Sheets-Sheet 1

Fig. 1

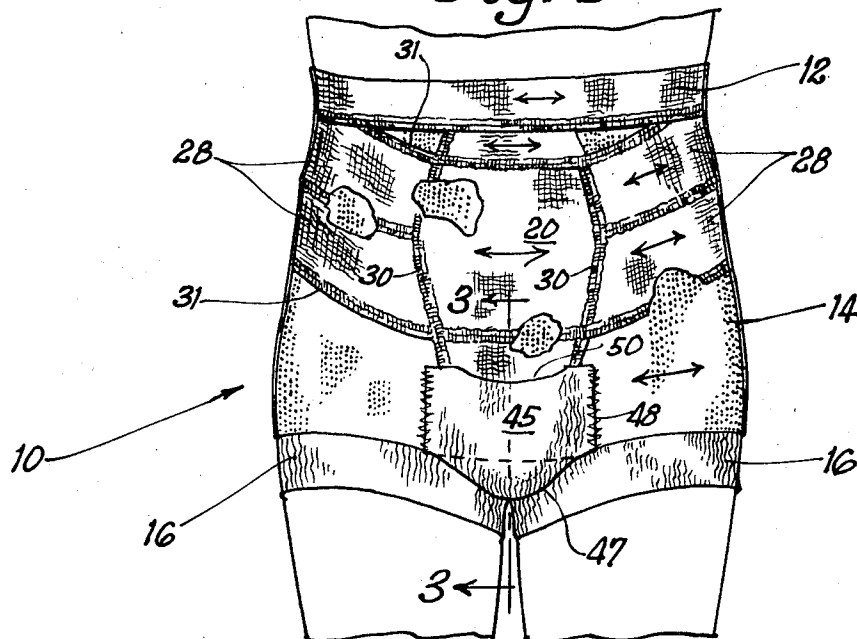


Fig. 2

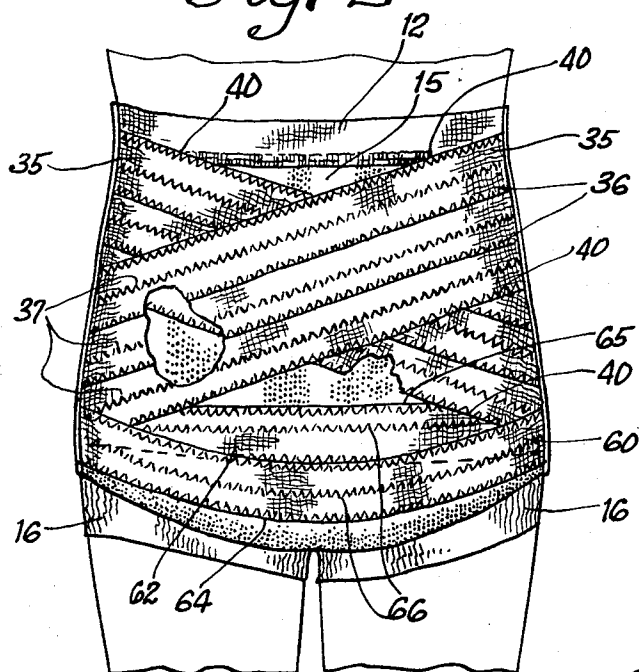
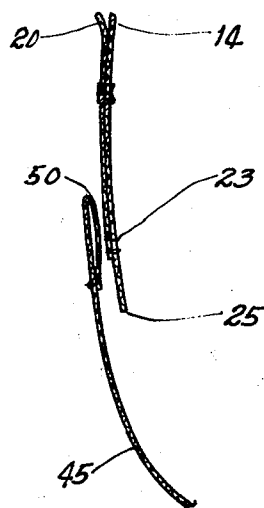


Fig. 3



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Fig. 4

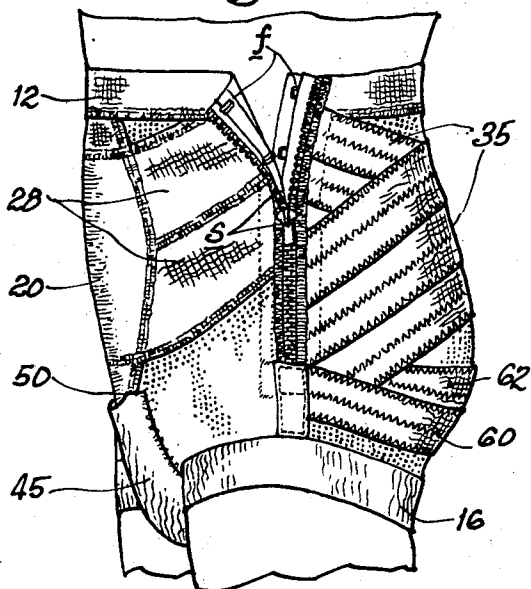


Fig. 5

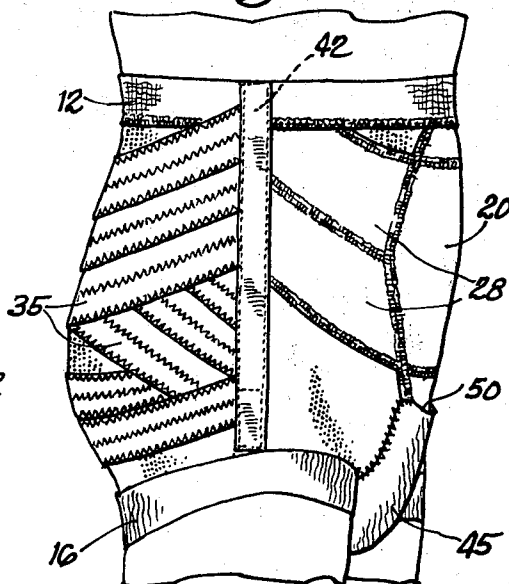


Fig. 7

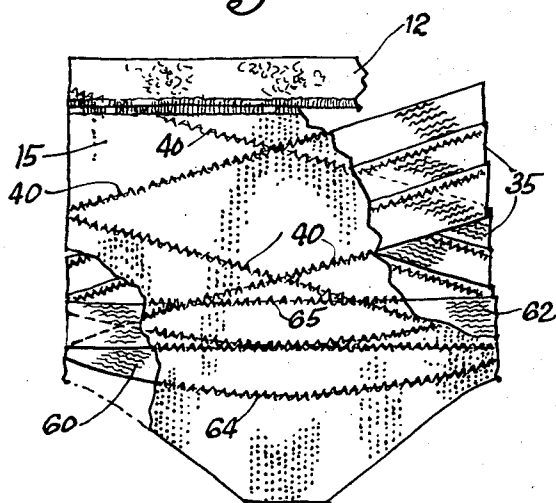
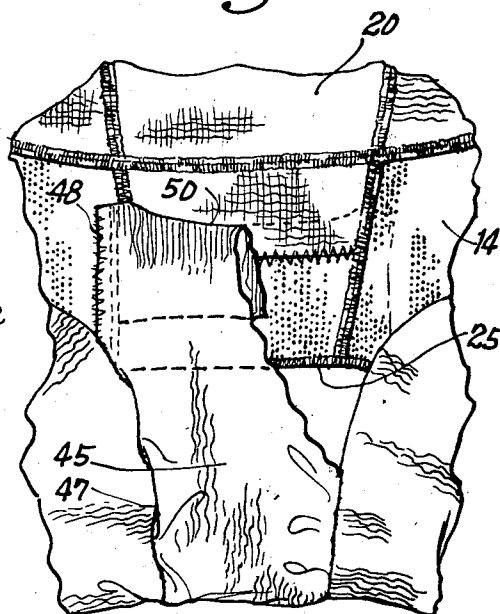


Fig. 6



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3,396,730

SURGICAL GIRDLE

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Continuation-in-part of application Ser. No. 507,757, Nov. 15, 1965. This application Nov. 15, 1967, Ser. No. 683,301

5 Claims. (Cl. 128—548)

ABSTRACT OF THE DISCLOSURE

A girdle intended primarily for therapeutic effect to prevent and to relieve back pain, along with improvement of posture and appearance, comprising a back portion having two series of elastic bands crossing in X-formation over the small of the back and one or more elastic bands extending under and uplifting the lower buttocks, and a front portion having a firm but resilient mid-abdominal panel and elastic bands extending at a slight angle downwardly from the sides to join said panel, to exert firm but yieldable support to the abdomen.

This application is in part a continuation of my co-pending application Ser. No. 507,757, filed Nov. 15, 1965, now abandoned.

Field of the invention

My invention relates to undergarments of the general class of girdles designed primarily from the standpoint of medical or surgical use, and is also of value for cosmetic or aesthetic purposes in that garments of this type tend to improve the posture and appearance of the figure.

The prior art

It is well known, in garments of this character designed for wear by either sex, to provide a girdle-like support, primarily for cosmetic purposes, to flatten the body contours, especially in figures having heavy buttocks and pendulous abdomens. As illustrations of art of this character with which I am familiar, reference may be made to:

Schlageter, No. 2,557,767, June 19, 1951.
Stone et al., No. 2,757,379, Aug. 7, 1956.
Arcuri, No. 2,949,917, Aug. 23, 1960.
Morehouse, No. 3,044,471, July 17, 1962.
Farino, No. 3,301,261, Jan. 31, 1967.

Certain of said prior art is said to be of therapeutic value, although I have found same to be deficient in major respects.

Summary of the invention

My invention goes far beyond art of this character, having primarily a therapeutic purpose, acting incidentally to improve the appearance of the figure.

My invention relates primarily to garments designed to support those muscles which are of major importance in controlling posture and, more particularly, with eliminating strain on muscles of the anterior abdominal wall and on the buttocks, which strain is a major factor in the cause of backache, in order that these muscles may perform their proper function in improvement of the posture.

More particularly, an object of my invention is to provide such a garment for wear by adults suffering from pains in the lower back from a variety of causes, especially postural, all of which are well known to the medical profession and need no elucidation here.

Another object is to provide a garment of the type referred to which will apply gentle pressure across the lower back and a gentle, resilient uplift to the upper

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buttocks and lower back below the coccyx, as well as uplifting supportive pressure to the anterior abdominal wall.

My invention contemplates a garment of the type referred to having resilient straps or bands of substantial width arranged in two series crossing each other in X-formation adjacent the small of the back, each series consisting of a plurality of parallel longitudinally elastic bands, in conjunction with one or more longitudinally elastic bands therebelow, underlying the buttocks and coccyx.

The buttocks-supporting series preferably comprises an upper generally horizontal band and a lower arcuate band sloping downwardly from the sides toward the middle, longitudinally elastic and underlying the lower buttocks, said horizontal and arcuate bands cooperating to provide firm uplifting pressure as well as transverse pressures tending to eliminate drag of the gluteal muscles and thus contribute to the prevention and to the relief of low back pain. This function is performed in cooperation with the above mentioned crossed straps which have their maximum overlap in the crossing area adjacent the small of the back, thus contributing to the support of the latter area.

Still another object is to provide, in a garment of the type referred to and in conjunction with the aforementioned back structure, a front center panel formed of horizontally resilient fabric to provide firm support over the center of the anterior abdominal wall together with a series of slightly downwardly and forwardly extending longitudinally elastic bands, said bands extending from the sides of the garment to said center panel and being joined thereto, to provide an uplifting support to the anterior abdominal wall.

The aforesaid elastic bands at both front and rear of the garment are secured at the sides of the latter where vertical flexible stays or other fixed but yieldable material to serve as anchors for the bands.

Various other objects and advantages will become apparent as the description proceeds.

Brief description of the drawings

Referring now to the drawings forming part of this specification and illustrating a preferred embodiment of my invention,

FIG. 1 is a front perspective view of a garment embodying my invention as worn on the human figure;

FIG. 2 is a rear perspective view of the same;

FIG. 3 is a fragmentary sectional view taken substantially along the line 3—3 of FIG. 1;

FIG. 4 is a perspective view of one side of the garment as worn;

FIG. 5 is a similar view showing the opposite side of the garment;

FIG. 6 is a fragmentary detailed elevation on an enlarged scale of a front portion of the garment, and

FIG. 7 is a fragmentary plan view of the inside of the front portion.

Detailed description

The numeral 10 indicates in general a garment of the type referred to, in this case being designed especially for male wear, having a longitudinally elastic waistband 12. Stitched to the waistband and extending therebelow is a main body or liner portion of horizontally stretchable fabric, comprising a front portion 14 and a rear portion 15.

For convenience, said front and back body portions 14 and 15 comprise each a single section, although this is not considered an essential feature of the invention.

Stitched to the lower extremity of the liner portion are

leg bands 16, 16, formed of longitudinally elastic stockinette or other suitable fabric.

Attached to the outside of the front liner portion 14 in a mid-abdominal panel 20 formed of two-way-stretch fabric, although somewhat more elastic horizontally than vertically. Said panel 20 at its upper edge is stitched to waistband 12. Its bottom edge 23 is stitched to the front liner portion 14 a short distance above the lower extremity 25 thereof, the latter being disposed over the public area of the body.

On either side of abdominal panel 20 is a plurality of longitudinally elastic straps or bands 28 which extend from the sides of the garment forwardly and downwardly at a slight acute angle to join abdominal panel 20, to the side edges of which said bands 28 are stitched as indicated at 30, 30.

The longitudinal edges of bands 28 are stitched to the body portion 14, the uppermost and lowermost lines 31, 31 of said stitching being extended across abdominal band 20, as seen clearly in FIG. 1, said stitching being also elastic.

The effect of abdominal panel 20 is to reinforce the body portion over the central abdominal region to provide firm but yieldable support over the anterior abdominal wall. Additionally, bands 28 contribute a substantial firm but yieldable uplift to the lateral portions of the abdomen. Thus, the net effect of the bands 28 in conjunction with panel 20 is to draw in and support an excessive or pendulous abdomen, contributing markedly to the comfort of the wearer and tending in marked degree to elimination of back pain in cooperation with the back structure to be described, and also effecting an aesthetic improvement to the figure.

Considering now the back of the garment as shown in FIGS. 2-5, inclusive, I provide in this part of the garment two series of longitudinally resilient bands 35 of character similar to straps or bands 28 provided in the front portion of the garment as described above, each series crossing the other in X-formation adjacent the small of the back (FIG. 2).

That is to say, each group or series (shown as three in the preferred embodiment here illustrated, although the series may comprise a plurality of two or more), each band being longitudinally elastic and similar in quality to bands 28 at the front of the garment.

The elastic may be of any desired width. In my preferred embodiment these bands are approximately two inches wide but may be of somewhat less or greater width, say from one and one-half to two and one-half inches. Each band of a given series is stitched to an adjacent parallel band along a line of stitching as indicated at 36, and may slightly overlap the adjacent band, while each band also preferably has a row of stitching intermediate the longitudinal edges thereof as indicated at 37, all of which stitching is elastic. However, each group or series of parallel bands is free of the liner portion 15 except along the outermost edges of each series, as indicated at 40, 40.

Also provided in the back of the garment are elastic bands 60, 62, positioned to underlie the lower buttocks to provide firm but resilient uplifting pressure on those tissues. It will be noted that upper band 62 is positioned to underlie the end portions of diagonal bands 35, said band 62 extending in a generally horizontal position across the lower back, while band 60 is of arcuate formation sloping gently down to the center and overlying end portions of band 62 and also the extremities of lowermost diagonal bands 35.

It will be noted that bands 60, 62 are stitched to liner portion 15 along their outer edges, 64, 65 and are also provided with intermediate rows of longitudinal stitching 66 which are free of the liner portion, all of said stitching being longitudinally resilient.

It will be seen that the diagonal crossed resilient straps or bands 35 provide firm but gently yieldable supporting

pressure to the back muscles disposed over the kidneys and small of the back, while bands 60, 62 provide uplifting pressure to the gluteal muscles below the coccyx, relieving strain on the back muscles by giving adequate support to excessively tissueed buttocks.

The back bands 35 as well as the front bands 28 are anchored at the sides of the garment, as seen clearly in FIGS. 4 and 5, a flexible vertically extending stay 42 (FIG. 5) preferably being provided along the outer legs, these stays being formed of suitable flexible material such as spring steel, whalebone, suitable synthetic plastic or the like. Each stay is encased in a suitable pocket formed in the fabric, according to technique well known in this art, and functions to maintain the garment in proper position along the thighs to prevent "rollover" and to provide the necessary reinforcement or anchor for the support of the aforesaid bands.

On one side (FIG. 4) suitable closure means is provided such as a slide fastener S, which may be sufficient, but I preferably use such fastening means in combination with spaced fasteners f which may be in the form of snappers, hooks and eyes, etc. Such a combination of fastening means produce a neat and smooth finish to the garment as worn, while facilitating dressing and undressing.

Inasmuch as the garment of the embodiment shown is intended for male wear, a suitable pouch 45 is provided, said pouch being formed of a suitable stretchable material such as stockinette or the like, similar to leg bands 16 to which the pouch is stitched as indicated at 47, said stitching extending vertically as at 48 to secure the pouch to body portion 14, the upper edge 50 of said pouch being free. The lower edge of the pouch is stitched to the bottom of back body member 15 along a seam not seen in the drawings.

It has been found by the many users of garments embodying my invention that said garments provide great relief to the fatigue normally suffered by persons burdened with excessive or flabby flesh in the abdomen and buttocks, such fatigue usually being centered in the back muscles. Persons wearing garments embodying my invention may engage in their usual activities, involving sitting or muscular movement, without the fatigue and discomfort usually encountered by such persons lacking the benefits of my invention.

Such persons wearing a garment embodying my invention also have the benefit of a more trim figure.

It will be understood that the garment herein described may be readily adapted to the female figure by suitable modification of the crotch portion.

Various changes coming within the spirit of my invention may suggest themselves to those skilled in the art; hence, I do not wish to be limited to the specific embodiments shown and described or uses mentioned, but intend the same to be merely exemplary, the scope of my invention being limited only by the appended claims.

I claim:

1. In a girdle of the class described,

(a) front and back liner portions of horizontally elastic fabric, an elastic waistband, and a crotch portion,

(b) two series of generally parallel longitudinally elastic bands crossing in generally X-formation approximately over the small of the back of the wearer and stitched to the back liner,

(c) a longitudinally elastic band also stitched to the back liner and extending generally horizontally across the lower back portion of the girdle and uplifting the lower buttocks,

(d) body supporting means stitched to the front liner comprising a horizontally elastic panel disposed over the mid-portion of the abdomen of the wearer and a longitudinally elastic band extending from each side of said panel across the lateral abdominal areas of the sides of the garment, and

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(e) means at the sides of the garment for anchoring said front and back bands.

2. A garment as in claim 1, having a pair of horizontally elastic buttocks-supporting bands secured to the back liner below the crossed bands at the back,

(a) the upper of said pair being generally horizontal while

(b) the lower of said pair extends in a downward arc toward the center,

(c) both of said pair being below the coccyx.

3. A garment as in claim 1, having a plurality of elastic bands extending over the lateral abdominal areas and stitched to each other and to the front liner, and extending at an acute angle to the horizontal, to provide a gently uplifting pressure to the side abdominal walls.

4. A garment as in claim 1, having a pair of horizontally elastic bands below the crossed bands at the back,

(a) the upper of said pair being generally horizontal while

(b) the lower of said pair extends in a downward arc toward the center,

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(c) both of said pair being below the coccyx, and

(d) said garment having a plurality of elastic bands extending over the lateral abdominal areas and stitched to each other and to the front liner, and extending at an acute angle to the horizontal, to provide a gently uplifting pressure to the side abdominal walls.

5. A garment as in claim 4, wherein said bands are of substantial width of the order of about two inches.

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ADELE M. EAGER, *Primary Examiner*.