United States Patent

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[72] Inventor **Simon Fredricks**
5111 Contour Place, Houston, Tex. 77035

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[54] **MAMMARY SUPPORT**
8 Claims, 4 Drawing Figs.

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[51] Int. Cl. **A41c 3/00**
[50] Field of Search 128/427, 429, 458, 482, 490, 494, 500, 501, 504, 508, 510, 512

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Primary Examiner—Richard J. Scanlan, Jr.
Attorney—Bernard A. Reiter

ABSTRACT: A mammary supportive dressing constructed of uniformly distensible material and having a back panel and front panels, the latter detachably connected to one another for facilitating application and removal of the dressing. Each front panel includes a breast cup means having an upper section of elliptical profile and a lower section of semielliptical profile arranged and connected to one another and to the detachable panels in a manner reducing respiratory restriction and post operative hematoma and seroma formation while at the same time exerting such uniform force as to maintain artificial implants in position during healing.

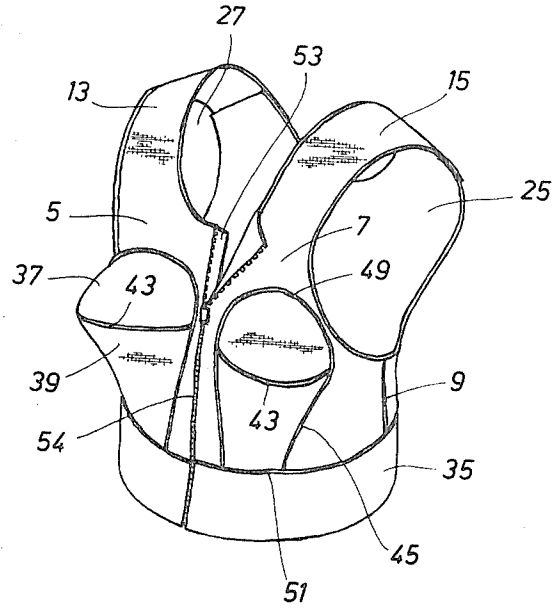


FIG. 1

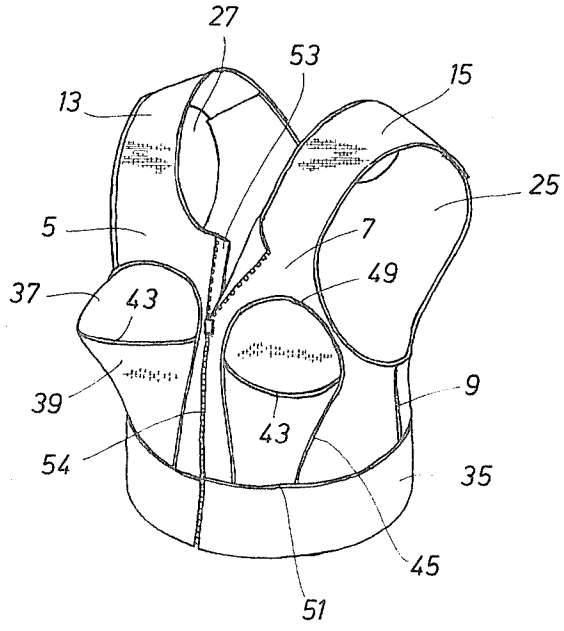
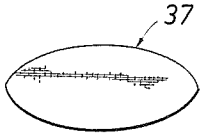
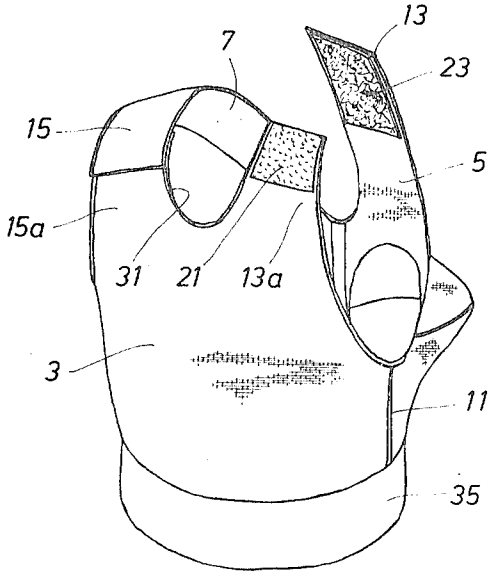


FIG. 3





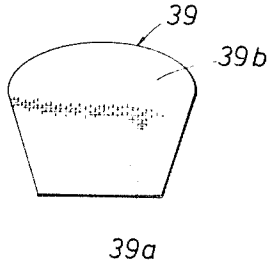


FIG. 4

FIG. 2

Simon Fredricks
INVENTOR

BY Bernard A. Reiter
ATTORNEY

MAMMARY SUPPORT

BACKGROUND OF THE INVENTION

This invention pertains to dressing means for use on female patients in a post operative condition. More particularly the invention is directed to an improved supportive dressing to be worn by a patient subsequent to a breast operation.

Heretofore a variety of different methods have been utilized for dressing of female patients subsequent to all types of surgery of the breast. One of the more conventional methods has been the application of an adhesive dressing in which an adhesive tape or bandage or the like is wrapped in deliberate manner around the upper torso. Such a dressing is not only time consuming and difficult to apply, but is frequently painful to the patient and not uncommonly produces allergic response resulting in blistering, itching and other types of discomfort. Still further, there may result from the blistering various surgical complications which in themselves require further treatment. One such complication results from blistering and resides in the form of a permanent pigmentation of the skin which causes cosmetic embarrassment of the patient.

Another type of dressing commonly used is the elastic bandage. This bandage is made of an expansible material having restrictive characteristics and because of these characteristics there is applied to the body a constrictive force causing labored respiration on the part of the patient. Like the adhesive-type dressing, the elastic variety predisposes the patient to medical complications which in themselves must be treated. Pneumonia and atelectasis are such complications. Further, the elastic bandage is particularly uncomfortable to the patient and may cause cuts and/or bruises of the shoulders. Still further is the ever present danger of brachial palsy.

These and numerous other complications and functional disadvantages characterize the dressings presently used. It becomes readily apparent that a new and improved dressing to be used on patients undergoing substantially any type of breast surgery is not only long over due but, in fact, is urgently called for.

SUMMARY OF THE INVENTION

The present invention is, therefore, directed to a new and improved supportive dressing which not only eliminates the allergic response produced by adhesive dressings but also eliminates or at least substantially reduces the totally restrictive effect which has been a consequence of the elastic type of bandage. Naturally, the complications resulting from each of the prior art types of dressing are eliminated upon utilization of the improved supportive dressing otherwise referred to as the mammary support.

The supportive dressing or mammary support not only eliminates all of the hazards presently in prior dressings but additionally is uniquely adapted to hold artificial implants in position so that substantially no dislodging or slippage occurs during the healing process. Also, the mammary support discourages post operative bleeding, hematoma and/or seroma formation. This is due to the uniformly compressive and equally distensible material and unique construction of the support, all of which calls for a uniform and equal distribution of pressure in a painless and relatively comfortable manner. Still further it affords easy post operative examination of the patient and eliminates costs of numerous redressings post operatively. Also, it permits safe early ambulation of the patient, thereby minimizing risks of post operative complications of phlebitis and/or pulmonary emboli.

These and numerous other features and advantages of the invention will become more readily apparent upon a reading and careful examination of the following detailed description claims and drawings wherein like numerals denote like elements in the various views and wherein:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a slightly rotated frontal view of a preferred embodiment of the invention.

FIG. 2 is a slightly rotated rear view of the preferred embodiment of FIG. 1.

FIG. 3 shows a profile outline of the cup upper section.

FIG. 4 shows a profile outline of the cup lower section.

DETAILED DESCRIPTION

With reference now to the drawings and particularly FIGS. 1 and 2 there is shown the mammary support comprising the back panel 3 and a right and left front panel 5 and 7 respectively. The panels 5, 7 are integrally connected to back panel 3 at the body seams 9, 11 to form a bodylike shirt. Each of the front panels is further characterized by a somewhat tapered upper portion which defines the right and left shoulder straps 13 and 15. The back panel 3 (FIG. 2) is likewise characterized by a somewhat tapered upper section which defines the shoulder straps 15*a* and 13*a*. Each of the terminal ends of the four shoulder straps 13, 15, 15*a*, 13*a* contains some appropriate connection means so that, for example, the right shoulder strap 13 extending from the front panel can fixedly engage the terminal end of the shoulder strap 13*a* extending from the back panel. Such connection means will preferably take the form of conventional Velcrostrip tape or other hook 21 and pile 23 material.

As shown in both FIGS. 1 and 2, the side portion of the back panel 3 and each of the front panels 5, 7 contain a substantial cutout 25, 27 defining the arm and shoulder opening for the patient. The mating shoulder straps 13, 13*a* and 15, 15*a* can be totally separated from one another in order to facilitate positioning and connecting of the support to the patient. Additionally the size of the arm and shoulder opening 25, 27 can be varied by moveably connecting the Velcro pile 23 to the Velcro hook 21 at different positions on the latter.

As best shown in FIG. 2 the back panel 3, front panels 5, 7 and shoulder straps further define a cutout head and neck opening 31 through which the patient's neck normally extends. It is apparent that the cutout sections from the various body panels 3, 5 and 7 each merge smoothly into one another in order to define the respective arm and shoulder openings 25, 27 and the head and neck opening 31.

Circumferentially extending around the support at a position slightly above the waist of the patient is an extensible body band 35. The body band is constructed of a material adapted to be stretchable only along the circumferential direction. The primary function of the body band is to securely maintain the position of the support at a point intermediate the waist and the cup means so as to prevent slippage or creep of the support upwardly while the patient is wearing it. Inferior results can only accrue if the body band is distensible in any but the circumferential direction for significant benefits are derived by the consistent and reliable positioning of the support on the body of the wearer.

As best shown in FIG. 1, the support is further characterized by a respective cup means in each the right and left front panels 5, 7. The cup means each comprise an upper cup section 37 and a lower cup section 39 connected to one another along the common horizontal seam 43. The seam 43 connecting the two sections of the cup is most appropriately disposed in the horizontal direction in order to avoid transverse contact with normally disposed breast incisions, thereby avoiding or at least reducing sources of irritation. Each of the cup sections 37, 39 is integrally connected to the front panels 5, 7 along the cutout profile defined by the lower cup seam 45 and the upper cup seam 49. The lower cup section 39 is connected to the body band 35 along the lower bottom seam 51 so as to thereby provide for a total breast cup construction of markedly improved design. Also, due to the direct connection of cup section 39 to band 35 all tensile forces are directly transmitted to the band.

With reference to FIG. 3 there is shown the upper section 37 of the cup illustrating the elliptical profile thereof. It will be recognized that this section is so shaped in order to normally engage without substantial distension of the upper portion of

the breast. The lower cup section **39** is similarly illustrated in FIG. **4** wherein it is shown that the lower portion **39***a* of the cup section consists of a somewhat truncated trapezoid having a semielliptical **39***b* upper profile. The truncated portion is of extended length so that when it is connected to band **35** there will result a relatively uniform downward pull or restraint both on lower cup section **39** and upper cup section **37**. It may thus be visualized that upon connection of the lower cup section **39** to the upper cup section **37** along the terminal edge of the semielliptical upper profile portion **39***b* there results, along the common seam **43**, an inherent outwardly protruding integral cup on each of the front panels **5**, **7**. By constructing these cups and the respective aforementioned panels of the support from a uniformly distensible uniformly compressive smooth textured material, such as elasticized nylon, there results an extremely comfortable and highly effective supportive dressing which is disposed on the patient in relatively facile manner. All seams are specifically sewn flat and face outward away from the body surface thereby enhancing the wearer's comfort and also preventing disruption or irritation of wound edges. In utilizing the supportive dressing of the invention it will be readily recognized that the entire device is readily opened into a substantially flat garment by separating the shoulder straps from one another and by unzipping the front panels by means of the zipper **54**. Thereafter the dressing is easily positioned on the body of the patient and the shoulder straps connected to one another with substantially no movement on the part of the patient. It is not necessary for the patient to exert effort in movement of the arms into the arm and shoulder openings since the front panels may simple be folded over the front of the body and the shoulder straps connected to one another thereafter. Upon completion of these steps the protective flap is carefully arranged on the surface of the body and the two panels utilized by operation of zipper **54**. There is thus provided an effective supportive dressing which is relatively simple to put on and to take off and which obviates most, if not all, of the disadvantages described hereinabove in more conventional dressing means.

Therefore, that which is claimed and desired to be secured by U.S. Letters Patent is:

1. A mammary supportive garment to be used as a dressing on the torso of post operative mammary surgery patients comprising:

a uniformly distensible body shirt having arm and neck openings therein and a pair of mammary-contoured cup means disposed on one side thereof,

each said mammary-contoured cup means consisting of upper and lower cup sections, said upper cup section being characterized by a lower terminal edge and said lower cup section being characterized by an upper terminal edge, each said upper and lower terminal edges being affixed to one another so as to define a common cup section seam which is oriented so as to minimize abrasive contact with an angularly oriented mammary incision on the patient's torso,

a circumferentially oriented body band of substantial width constructed of material distensible circumferentially but not laterally thereof and having said lower cup sections and said uniformly distensible body shirt affixed each respectively thereto; the substantial width and nondistensible characteristics of said body band constituting cooperating factors which serve to preclude creep of the garment upwardly on the patient torso and thus maintaining uniform support over the torso surface.

2. A mammary supportive garment to be used as a dressing on post operative mammary surgery patients comprising:

a uniformly distensible body shirt having an arm opening on each side, the neck opening in the top which thereby defines shoulder straps and mammary cup openings in the front thereof, contoured cup means affixed in each of said cup openings,

each said mammary cup means consisting of upper and lower cup sections affixed to one another along a common seam so as to minimize abrasive contact with a mammary incision, said lower cup sections being configured to resemble a truncated shape along their lower edge,

a circumferentially oriented body band being characterized by a substantial width sufficient to preclude creep of the garment upwardly, said body band being constructed of material distensible circumferentially but not laterally thereof and having said lower cup sections and said uniformly distensible body shirt each affixed respectively thereto; the nondistensible characteristic of said body band in the lateral direction constituting a cooperating factor in conjunction with the substantial width thereof so as to further tend to distrain creep of the garment upwardly on the patient torso, thus maintaining uniform support over the torso surface.

3. The mammary supportive garment of claim **1** wherein said upper cup section has a profile substantially in the shape of an elipse in which the minor axes thereof reside on a line included within a circumference of the torso on which the garment is worn, both said upper and lower cup sections being affixed in openings in the front panels of the garment.

4. The mammary supportive garment of claim **2** in which each of said shoulder straps comprise front and rear portions that carry cooperating coupling means for connecting the front portion of each strap to the rear portion thereof and,

wherein said body shirt is characterized by central opening in the front thereof extending from the neck opening downwardly through the body band, said central opening including coupling means for connecting one portion of the garment to the other,

said coupling means on said shoulder straps and the coupling means on said front opening all being releasable so that the garment may lie flat without overlap to itself when not worn.

5. The mammary supportive garment of claim **2** wherein said upper cup section has a profile substantially in the shape of an ellipse in which the minor axes thereof reside on a line included within a circumference of the torso on which the garment is worn.

6. The mammary supportive garment of claim **2** wherein the area of said shirt between the arm and neck openings defines respectively separable front and rear shoulder strap sections, the area of said shirt between said cup means being characterized by a separable coupling means adapted to releasably close the front of the garment on a line extending from the neck opening downwardly through the body band and,

coupling means affixed to said respective shoulder strap sections for opening each of said shoulder straps, said coupling means and said releasable closure means thereby providing for a garment which may be easily removed from a wearer and which may be laid upon a plane or surface with no section of the garment overlapping another section.

7. The garment of claim **2** wherein all of the sections thereof are affixed to one another by sewing and in which the seams are sewn flat and face outwardly away from the interior of the garment so as to thereby enhance comfort of the wearer and preclude irritation to the skin.

8. A mammary supportive dressing adapted for easy application and removal comprising;

a pair of front panels detachably connected to one another,

a back panel integrally connected to each of said front panels,

a body band circumferentially connected to the lower end of each of said panels, said body band being extensible in the circumferential direction and inextensible laterally thereto,

a breast cup integrally forming a part of each of said front panels, each of the breast cups including upper and lower cup means adapted to securely engage the body contour while applying a uniform distribution of body-directed forces,

said lower breast cup means being in physical communication with said body band so that expansion or contraction forces of the breast cup are transmitted directly to said body band, which because of its inelastic characteristic in all but the circumferential direction, prevents the dressing from slipping upward on a wearer.

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