

United States Patent

[11] 3,576,037

- | | | |
|------|-----------|---|
| [72] | Inventor | Margaret F. Klein
179-15 Kildare Road, Jamaica Estates,
N.Y. 11432 |
| [21] | Appl. No. | 810,680 |
| [22] | Filed | Mar. 26, 1969 |
| [45] | Patented | Apr. 27, 1971 |

- | | | | |
|-----------|---------|---------------------|---------|
| 2,637,851 | 5/1953 | Peck..... | 3/36 |
| 2,657,386 | 11/1953 | Wolff | 3/36 |
| 2,661,470 | 12/1953 | Day | 3/36 |
| 2,696,005 | 12/1954 | Schaumer..... | 2/267X |
| 2,920,627 | 1/1960 | Williamson..... | 128/465 |
| 3,114,374 | 12/1963 | Chalfin et al. | 128/465 |

Primary Examiner—Richard A. Gaudet

Assistant Examiner—Ronald L. Frinks

Attorney—Robert W. Fiddler

- [54] ARTIFICIAL BREAST MEMBER**
4 Claims, 2 Drawing Figs.

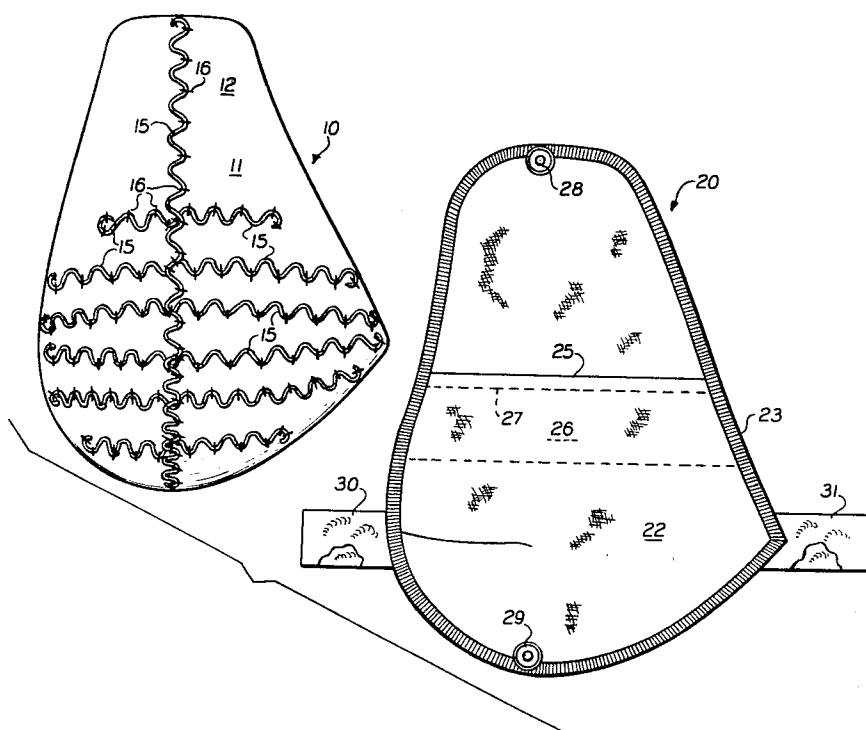
- | | | |
|------|----------------------|--|
| [52] | U.S. Cl..... | 3/36,
128/465, 128/478 |
| [51] | Int. Cl..... | A41c 3/10,
A61f 1/00 |
| [50] | Field of Search..... | 3/36, 1;
128/463—465, 478—481; 2/267, 268 |

- [56]
- References Cited**

UNITED STATES PATENTS

- 401,028 4/1889 Greene..... 128/463X

ABSTRACT: An artificial breast member formed of a resilient material such as foam rubber or the like contoured to the desired breast shape and provided with a plurality of surface contouring spring members formed with a series of interspersed sinusoidal return bends, said spring members arranged adjacent the surface of the resilient material serving to insure maintenance of desired surface contour.



ARTIFICIAL BREAST MEMBER

BACKGROUND OF THE INVENTION

This invention relates to the art of artificial breast members, and more particularly to an artificial breast member suitable for use as a breast prosthesis after surgery, or for augmenting inadequately developed natural breasts, in which the artificial member maintains its shape over relatively long periods of use, and has the desired realistic appearance of the natural skin encased breast.

A variety of situations exist in which artificial breast members are employed, either as prosthesis after surgery, or as augmentation for what is believed to be inadequate natural endowment. To this end, a variety of artificial breast structures have been evolved.

These previously evolved breast constructions have all attempted to obtain the desired appearance of naturalness, along with comfort for the wearer. However, with time, it is found that the natural deterioration of the resilient material resulting from use and cleaning serves to produce a loss of surface shape, apparently due to the fact that the surface of these artificial breast members is formed with the same resilience as the interior of the member.

Additionally, it is found that where the surface resiliency of the artificial breast member is the same as the resiliency of the interior material of the breast member, a lack of naturalness in appearance results.

BRIEF DESCRIPTION OF THE INVENTION

It is with the above considerations in mind, that the present improved artificial breast member construction has been evolved, providing a breast member suitable for use in prosthesis or augmentation, and having desired naturalness of appearance.

It is accordingly among the objects of this invention to provide an artificial breast member which will be subject to minimal deterioration as a result of use and cleaning.

A further object of the invention is to provide an artificial breast member in which the desired shape of the breast member will be retained with the passage of time.

It is also an object of the invention to provide an improved construction for an artificial breast member formed of foam material in which the normal deterioration of the foam material with time resulting from the natural oxidation of the material will not affect the appearance of the breast member.

A further object of the invention is to provide an artificial breast member having the desired combination of greater surface resiliency, as compared to interior resiliency such as exists in the natural breast.

These and other objects of the invention which will become hereafter apparent are achieved by forming an artificial breast member with a body portion of foam material, such as foam rubber, or synthetic resilient foam materials such as polyurethane, or the like. Desired surface contouring and resiliency which is different than the resiliency of the interior portion of the artificial breast is obtained by arranging a plurality of spring members in the form of rippled springs arranged adjacent the surface of the body member, and positioned to obtain desired contour. In order to implement utilization of the artificial breast member with a variety of different undergarments such as brassieres or the like, a casing is provided with securement means for fastening the casing and the enclosed artificial breast member to an undergarment.

A feature of the invention resides in the fact that the rippled springs are subject to flexing in any direction transverse to their axis, and at any point therealong, as a result of which desired flexibility is obtained.

A further feature of the invention resides in the arrangement of the rippled springs adjacent the surface of the body member of the artificial breast, extending along transverse and longitudinal axis to provide support for the artificial breast member against longitudinal sagging, or transverse spreading.

BRIEF DESCRIPTION OF THE DRAWINGS

The specific details of a preferred embodiment of the invention, and their mode of functioning will be particularly pointed out in clear, concise, and exact terms in conjunction with the accompanying drawings wherein:

FIG. 1 is an exploded view of an artificial breast member made in accordance with the teachings of this invention, showing the breast member to the left, and the covering case therefor to the right;

FIG. 2 is a cross-sectional view along a longitudinal axis of the artificial breast.

DESCRIPTION OF PREFERRED EMBODIMENT OF THE INVENTION

Referring now more particularly to the drawings, like numerals will be employed in the various figures to designate like parts.

As best seen to the left in FIG. 1, and in cross section in FIG. 2 the artificial breast member 10 is formed with a body member 11 in the contour of a human breast, with a transition portion 12 contoured to provide a smooth transition between the upper portion of the chest and the breast. This body member 11 and its transition portion 12 is preferably formed of a moldable resilient material such as latex foam rubber. A variety of other materials may obviously be employed such as foamed polyurethane or the like relatively inert stable materials, the density and resilience of which can be controlled so as to provide a relatively cushiony structure.

Resilient spring members 15 subject to bending in any direction transverse to their longitudinal axis are provided in the form of rippled springs which are illustratively shown as formed of relatively thin steel spring wire bent into the desired rippled shape by forming a plurality of sinusoidal reverse bends along the length of the spring. These springs are preferably made of a rust resistant steel, or coated to prevent surface oxidation during washing or the like. The springs 15 may be molded into the body member 11 adjacent the surface thereof to retain them in position, or as illustrated in the preferred embodiment by securing same to the surface by means of stitching 16. As best seen to the left in FIG. 1, the springs 15 are arranged with at least one spring extending along the central longitudinal axis of the breast-shaped body member 11, and a plurality of transversely extending springs.

A covering case 20, as best seen to the left in FIG. 1 is provided formed of a contour to encompass the breast-shaped body member 11 and provided with a lower surface ply 21 joined to a two part upper surface ply 22 by means of overedge stitching 23 formed at the periphery of the plies. Access to the interior of the case 20 is provided through an opening in upper ply 22 produced by forming upper ply 22 with a lower portion having a flap 26 tucked in and overlapping the lower edge 25 of the upper part of the top ply 22, as best seen in FIG. 2. Snap fasteners 28 and 29 are preferably provided at the upper and lower extremities of top ply 22 for use in securing the encased breast member in a brassiere cup which as will be understood is provided with cooperating snap fasteners. Additionally, loop flaps 30 and 31 are extended from each of the lateral extremities of the case 20, as viewed in FIG. 1, which flaps serve the two-fold purpose of implementing orientation of the breast member 10 in a brassiere cup, and providing for lateral securement of the breast member 10 to the brassiere cup should such be desired as by the use of a sewing stitch, or snap.

OPERATION

In use, the aforedescribed artificial breast, after being fabricated as above described, is employed by securing same within the brassiere cup of a foundation garment or the like. The resilient springs 15 adjacent the surface of the breast-shaped foam rubber body member 11 serve to contour the body member 11, and insure its maintenance in its desired

contour. Thus the deterioration normally occurring in molded foam material such as foam rubber or the like which might tend to interfere with the desired shape of the breasts member is avoided by virtue of the fact that the springs act to maintain desired surface contour.

Additionally, it is found that a lifelike resilience is obtained such as would normally not be obtained in the utilization of a simple foam rubber mass. This appears due to the fact that the normal human breast consisting as it does of a fleshy mass encapsulated in a skin covering does not have uniform density and resilience throughout. Thus by providing for surface resilience, by the utilization of spring members having a resilience, which is different than the interior resilience of the breast member, a more natural appearance results. By virtue of the fact that the springs are rippled, they are subject to bending in any direction transverse to their longitudinal axis. Thus the flexing which would normally be expected of the skin of the normal breast is simulated, and return after flexing to desired full contour is provided.

I claim:

1. An artificial breast member comprising: a body member formed of a moldable resilient material having a rounded upper surface simulating the contour of a human breast and a slightly convex rounded lower surface; a transition portion extending from the normally top portion of the breast shaped

body member formed integrally therewith and contoured to provide a gradual surface transition from the protruding breast-shaped body member to the torso of the wearer above the breast; a rippled resilient elongate sinusoidally bent spring member secured to the upper surface of said body member along a longitudinal axis of said body member; plurality of separate rippled resilient sinusoidally bent spring members secured to the upper surface of said body member along spaced lines transverse to said longitudinally extending spring member, said spring members having a higher degree of resilience than the material of said body portion; and a covering case having a lower surface ply and an upper surface ply between which plies said body member and springs are accommodated, and peripheral stitching joining said plies, with an opening in said upper ply and a flap closing said opening.

2. An artificial breast member as in claim 1 in which said spring members are formed with a surface protecting coating.

3. An artificial breast member as in claim 1 in which said body portion is formed of latex foam rubber, and said spring members are secured to the surface thereof by space stitches.

4. An artificial breast member as in claim 1 in which said covering case is formed with fastening elements for securement to an undergarment.

30

35

40

45

50

55

60

65

70

75