

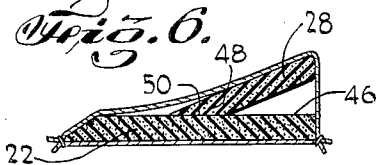
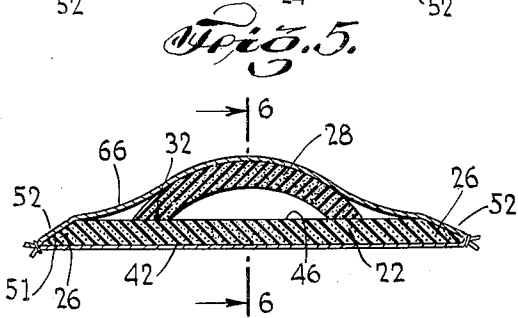
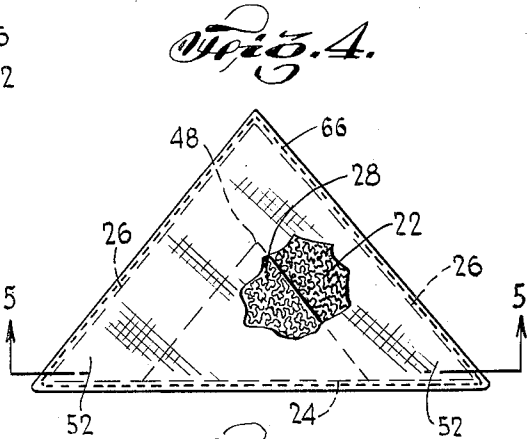
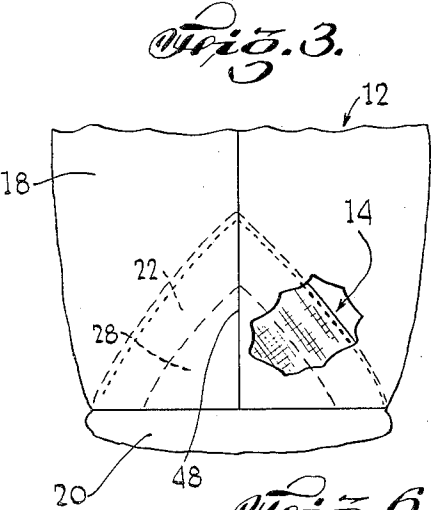
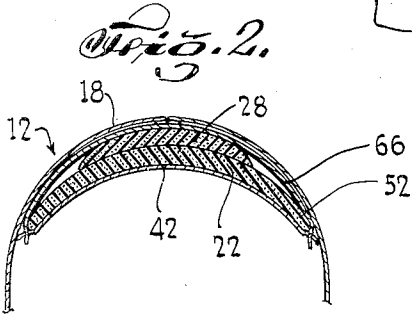
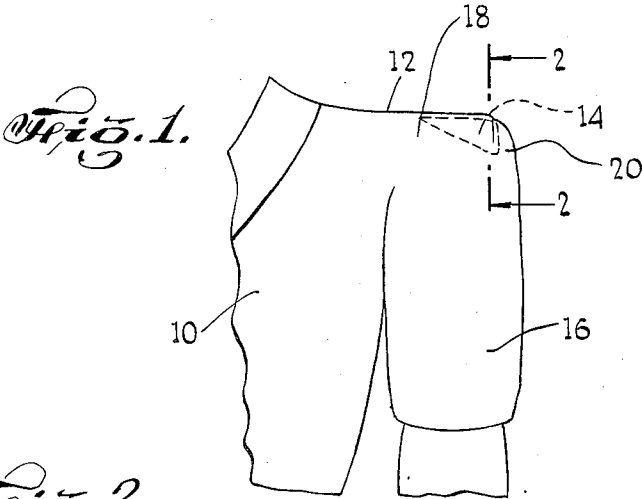
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G. A. PRAGER
PAD CONSTRUCTION

2,507,543

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2 Sheets-Sheet 1



INVENTOR.
GERALD A. PRAGER
BY
Henry L. Burkitt
ATTORNEY

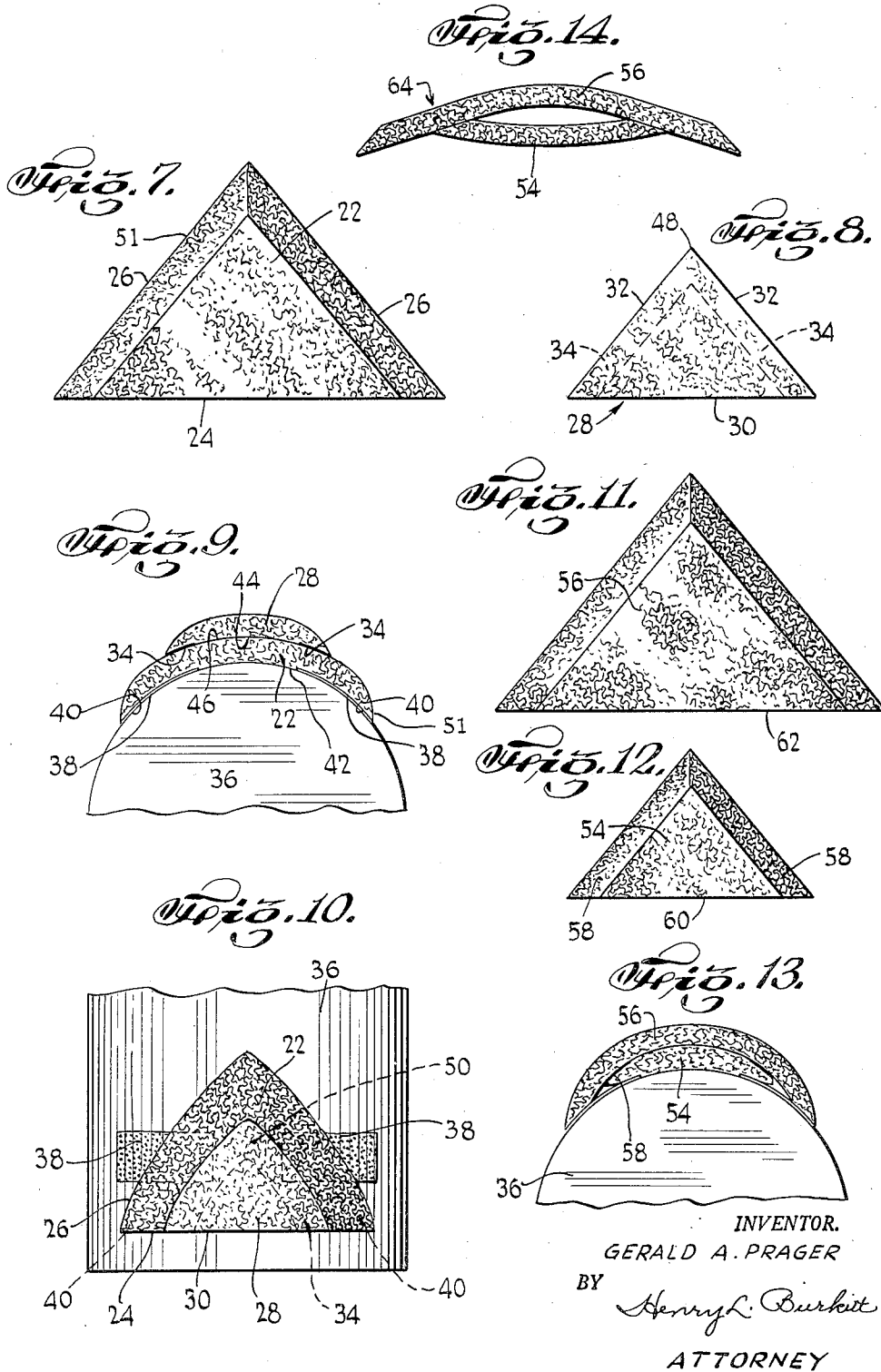
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UNITED STATES PATENT OFFICE

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PAD CONSTRUCTION

Gerald A. Prager, New York, N. Y., assignor to
Henry L. Burkitt, New York, N. Y.

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20 Claims. (Cl. 2—268)

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This invention relates to pad construction.

The use of padding to build up the shoulders of garments to make them depart from their normal appearance is well-known. Many different types of devices have been utilized for this purpose, but few, if any, lend themselves to washing or dry cleaning. Furthermore, the materials of which they are made are such that, once the pads are installed in the garment, they, in most cases, retain their shape only so long as the original shaping imparted to the pad is not disturbed. In case of washing or other manipulations of the garment, the pads tend to become distorted, and thereby to lose their form-defining contours.

It is an object of the invention to provide a shoulder pad which will maintain its contour-defining shape substantially constantly.

It is an object of the invention to provide a shoulder pad which, even though subjected to operations such as washing or dry cleaning, will not be affected as to its contour-defining properties.

It is an object of the invention to provide a shoulder pad of the type indicated, which may be manufactured cheaply and simply by a minimum number of operations, and which requires no special technique for its association with a garment.

Other objects of the invention will be set forth hereinafter, or will be apparent from the description and the drawings, in which are illustrated embodiments exemplifying the invention.

The invention, however, is not intended to be restricted to any particular constructions, or any particular arrangements of parts, or any particular application of any such construction or arrangement of parts, or any specific method of operation or use, or any of the various details thereof, even where specifically shown and described herein, as the same may be modified in various particulars, or may be applied in many varied relations, without departing from the spirit and scope of the claimed invention, of which the exemplifying embodiments, herein shown and described, are intended to be illustrative only, and only for the purpose of complying with the requirements of the Statutes for disclosure of an operative embodiment, but not to show all the various forms and modifications in which the invention might be embodied.

On the drawings, in which the same reference characters refer to the same parts throughout, and in which are disclosed such practical construction,

Fig. 1 is a detail elevational view illustrating a

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portion of a blouse disposed upon a figure, the blouse having a shoulder pad embodying features of the invention associated therewith;

Fig. 2 is a vertical cross-sectional view substantially on the line 2—2 of Fig. 1, illustrating the disposition of the pad in use;

Fig. 3 is a plan view of the garment and pad illustrated in Fig. 1, a part of the garment being broken away to illustrate the pad;

Fig. 4 is a plan view to enlarged scale of the pad embodying the invention, a portion of the pad being broken away in section to illustrate the internal construction thereof;

Fig. 5 is a vertical cross-sectional view substantially on the line 5—5 of Fig. 4;

Fig. 6 is a vertical cross-sectional view substantially on the line 6—6 of Fig. 5;

Figs. 7 and 8 are plan views of the pieces utilized in making the shoulder pads shown in Fig. 4;

Fig. 9 is a detail elevational view illustrating the method of making the shoulder pad shown in Fig. 4;

Fig. 10 is a plan view of the apparatus used in Fig. 9, illustrating a pad retained upon the apparatus;

Figs. 11 and 12 are plan views of the pieces utilized in making the modified pad shown in Fig. 14;

Fig. 13 is a detail elevational view similar to Fig. 9, illustrating the manner of making the pad shown in Fig. 14; and

Fig. 14 is a detail elevational view of a modified pad structure.

On the drawings, has been shown a blouse 10 at the shoulder 12 of which is associated a pad 14 embodying features of the invention. Sleeve 16 of the garment hangs from fabric 18 defining shoulder 12. Sleeve 16, at its upper end 20, depends from the outer extremity of pad 14 which serves to impart an upward tilt to fabric 18 at the shoulder, and thereby to sleeve 16, giving the appearance of a horizontal or a rising shoulder to the wearer.

Pad 14 may be assembled as a part of shoulder 12 in any preferred manner. The pad itself may be made from a piece 22 of air cell foam latex, such as now may be found on the market under the name "Geon." It is a product obtained by flowing a dispersion of rubber in fluid form into molds, and then aging that rubber in the molds. Such material will be found to be smoother on one side than on the other. This arises from the moulding process, the side towards the mold being smoother, while the surface not in contact with a mold surface has a porous appearance. Such material, however, is not water absorbent;

by a simple squeezing operation, as, for instance, such as produced when clothes are wrung, any water absorbed by the sheet is discharged almost completely. The material does not, in fact, have any great water absorptive property. The thickness of the sheet is determined by the amount placed in the mold.

For the production of a pad such as here being described, a sheet of approximately three-eighths of an inch thick has been found desirable; such a thickness, however, is not critical. The sheet is cut up into pieces 22 which, for certain purposes, are substantially triangular. The dimensions of the triangle may be varied, but a suitable arrangement has been found in the form of an isosceles triangle, the base 24 of which measures approximately six and three-quarters inches, and the sides 26, five and one-quarter inches. These dimensions are not intended to be critical, but have been found to serve certain practical purposes in actual use.

A separate piece 28, cut from the same material, may likewise be in the form of an isosceles triangle, having a base 30 of approximately three and one-half inches, and a side 32 of approximately three inches. Sides 32 preferably are bevelled, as at 34.

In order to make pad 14, piece 22 is positioned, as shown in Fig. 9, upon a form 36 which preferably is shaped to conform to the contour of a shoulder to which a garment bearing a pad of this type is fitted. Any suitable means may be provided for retaining piece 22 on form 36. One desirable method is to provide sticking points 38 on the form by means of pieces of Scotch tape. These pieces of tape are positioned so that portions 40 of surface 42 of piece 22 may be engaged to retain piece 22 in the shape of the form.

For certain purposes, rubber cement may be applied only to the faces of bevels 34. Then, while piece 22 retains the shape of form 36, piece 28 is positioned upon piece 22 so that surface 44 of piece 28 is directly in engagement with surface 46 of piece 22, and so that the bases 24 and 30 of pieces 22 and 28, respectively, are substantially in the same plane. At the same time, bevels 34 are brought down into engagement with surface 43. Thus, piece 28 will be adhered to piece 22 along the lines of engagement of bevels 34 with surface 46.

If it is desired to provide a smooth contour for pad 14, the point of intersection of bevels 34 at apex 48 may be shaved off further to provide a portion of tapering thickness having a bevel or surface 50 into which bevels 34 flow. Then, before surfaces 44 and 46 are brought into engagement, surface 50 may have an adhesive, such as rubber cement, applied to it. Then, when surfaces 44 and 46 are brought together, surface 50 will be adhered to surface 46.

Piece 28 will have been located during this operation so that its axis of symmetry, that is, its altitude from its apex 48, will be substantially in the same plane as the axis of symmetry of piece 22. In other words, sides 32 of piece 28 will be substantially parallel to sides 26 of piece 22. If desired, sides 26 likewise may be bevelled, as at 51, so that no sharp edges will appear through fabric 18 at shoulder 12. When piece 22 is released from form 36, and thereby the tension on surface 46 is released, the pad will be found to assume the arcuate contour shown in Fig. 5, in which piece 28 is raised away from surface 46. This separated relation of the pieces does not persist when pad 14 is affixed to a garment and

the garment itself is draped over the shoulder of a wearer. Ends 52 of piece 22 are pulled downwardly around the shoulder, and the pad takes the form shown in Fig. 2, in which case piece 28 follows substantially the contour of piece 22 but functions to produce a sufficient increase in height at the shoulder for proper functioning of pad 14.

In the modified construction illustrated in Fig. 14, piece 54 is made substantially in the same manner as piece 28 of Fig. 8; piece 56 is made substantially in the same manner as piece 22 of Fig. 7. In this case, however, piece 54 is positioned first on form 36, as shown in Fig. 13, with bevelled edges 58 facing outwardly. Adhesive material may be applied to bevelled edges 58 of piece 54. Then piece 56 is positioned, substantially in the same manner as in the case of pieces 22 and 28, so that the two bases 60 and 62 of the triangles are substantially in the same plane, but now piece 56 is on top of and conforms to the shape of piece 54. After piece 54 has become properly adhered to piece 56 along the position of the applied adhesive material, piece 54 is released from form 36, and the new pad 64 will be seen to assume the form shown in Fig. 14, in which pieces 56 now will assume an arcuate contouring. Piece 54 will have a slight curvature, but substantially opposite to that of piece 56. These curvatures, however, as will be noted from the relation of the pieces when positioned on form 36, merely are sufficient to provide for building up height at the point of contact of piece 54 with the shoulder of a wearer.

In either case, however, the adhesive material may be applied throughout the extent of the contacted surfaces of pieces 22 and 28, or of pieces 54 and 56. For instance, in one construction, piece 54 has no bevelled edges 58. Pieces 54 and 56 are adhered to each other while piece 54 remains secured to and flexed to the contour of form 36. Then, with the pieces thus adhered to each other, piece 54 is released from form 36; its square side edges may have been or are now coated with cement; both pieces are bent and the edges bearing the cement are pressed to bend over and into contact with the free face of piece 56. The result is that the pad produced will take a form closely approximating the shape of the pieces as held on form 36 in Fig. 13.

It should be pointed out that, in every case, there results a pad having a definite preformation because one of the layers had been flexed to the shape of the form, and had been so retained at the time the other layer was adhered thereto.

In the case of either pad 14 or pad 64, a fabric covering 66 may be provided. That fabric covering may be loose in the usual manner, in which case the fabric is stitched so as to form a housing for the pad. It has also been found possible to stitch the material of pads 14 and 64 directly to the fabric so that no covering material is necessary.

Many other changes could be effected in the particular constructions, and in the methods of use and construction, and in specific details thereof, hereinbefore set forth, without substantially departing from the invention defined in the claims, the specific description being merely of embodiments capable of illustrating certain principles of the invention.

What is claimed as new and useful is:

1. A shoulder pad for building up the shoulder portion of a garment, the pad comprising a sec-

tion of a sheet of elastic material, a portion of the same material secured to the section, the section being flexed out of its normal sheet form and substantially into the contour of a shoulder when the portion is secured thereto.

2. A shoulder pad for building up the shoulder portion of a garment, the pad comprising a substantially triangular section of normally planar elastic material, a portion of the same material but of smaller dimensions secured to the section, the section being flexed out of its normal sheet form and substantially into the contour of a shoulder when the portion is secured thereto.

3. A shoulder pad for use in padding the shoulder portion of a garment, the pad consisting of two pieces of elastic material, one of the pieces being larger than the other, the pieces being secured together in substantially superimposed relationship, one of the pieces being placed in tension along that surface thereof against which the other piece is to be superimposed and secured.

4. A shoulder pad for use in padding the shoulder portion of a garment, the pad consisting of two pieces of elastic material of substantially the same shape, one of the pieces being larger than the other, the pieces being secured together in substantially superimposed relationship and with edges of the pieces substantially coincident, one of the pieces being placed in tension along that surface thereof against which the other piece is to be superimposed and secured so that, on release of the piece from tension, the other piece will be deformed substantially from its normal state.

5. A shoulder pad for use in padding the shoulder portion of a garment, the pad consisting of two pieces of elastic material one of which is of triangular shape, one of the pieces being larger than the other, the pieces being secured together in substantially superimposed relationship by imparting an arcuate contour to one of the pieces and then positioning the other piece to conform to that contour and in contact with the first piece while securing the pieces together along edges of the smaller piece contacting the larger piece.

6. A shoulder pad for use in padding the shoulder portion of a garment, the pad consisting of two pieces of elastic material of triangular shape, one of the pieces being larger than the other, the pieces being secured together by imparting an arcuate contour to one of the pieces and then positioning the other piece so that one of its edges is substantially coincident with an edge of the other piece and shaping that piece to conform to the contour of the first piece while securing the pieces together along the other edges of the smaller piece.

7. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being of substantially the same geometrical contour but of different sizes, the sections being superimposed and disposed to coincide along axes of symmetry, and then being secured along a pair of edges of the smaller section, one of the sections, while the sections are being secured together, being retained in the form of a shoulder to which the pad is to be applied.

8. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being of substantially the same geometrical contour but of different sizes, the sections being superimposed and disposed to coincide

along axes of symmetry and along an edge of each of the sections, the sections being secured along a pair of the other edges of the smaller section, one of the sections, while the sections are being secured together, being retained in the form of a shoulder to which the pad is to be applied.

9. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being of substantially the same geometrical contour but of different sizes, the sections being superimposed and disposed to coincide along an edge of each of the sections, the sections being secured along a pair of the other edges of the smaller section, one of the sections, while the sections are being secured together, being retained in the form of a shoulder to which the pad is to be applied.

10. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being of substantially the same geometrical contour but of different sizes, the sections being superimposed and disposed to coincide along an edge of each of the sections, the sections being secured along a pair of the other edges of the smaller section, one of the sections, while the sections are being secured together, having a rounded contour.

11. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet of substantial thickness, the sections being of substantially the same geometrical contour but of different sizes, the sections being superimposed and disposed to coincide along axes of symmetry, and then being secured along a pair of edges of the smaller section, one of the sections, while the sections are being secured together, being retained in the form of a shoulder to which the pad is to be applied, edges of one of the sections being bevelled.

12. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being triangular but of different sizes, the sections being superimposed and disposed so that the bases of the triangles are substantially in the same line and the apices of the triangles are pointed in the same general direction, the sections being secured together only where the edges of the smaller section other than its base are in contact with the larger section, one of the sections being biased into an arcuate shape between the lines of engagement of the sections.

13. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being triangular but of different sizes, the sections being superimposed and disposed so that the bases of the triangles are substantially in the same line and so that the altitudes of the triangles are substantially in the same plane, the sides of the smaller section being bevelled, the sections being secured together only where the bevelled sides are in contact with the larger section, one of the sections being biased into an arcuate shape between the lines of engagement of the sections.

14. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being triangular but of different sizes, the sections being superimposed and disposed so that the bases of the triangles are substantially in the

same line and so that the altitudes of the triangles are substantially in the same plane, the sides of the smaller section being bevelled, the sections being secured together only where the bevelled sides are in contact with the larger section, the smaller section being biased into an arcuate shape between the lines of engagement of its sides with the larger section.

15. A shoulder pad for use in padding the shoulder portion of a garment, the pad comprising a pair of sections of sponge rubber sheet, the sections being triangular but of different sizes, the sections being superimposed and disposed so that the bases of the triangles are substantially in the same line and so that the altitudes of the triangles are substantially in the same plane, the sides of the smaller section being bevelled, the sections being secured together only where the bevelled sides are in contact with the larger section, the larger section being biased into an arcuate shape so that the smaller section has opposite curvature between the lines of engagement of the sides of the smaller section with the larger section.

16. The method of making shoulder pads for garments, which comprises the steps of forming a piece of an elastic material to the shape of the base of the pad, shaping the piece to the shape of a shoulder to which the pad is to be applied, applying another piece of an elastic material to the first piece so that the second piece conforms to the contour of the first piece, and adhering the two pieces only where portions of the edges of one piece contact the other piece.

17. The method of making shoulder pads for garments, which comprises the steps of forming a piece of an elastic material to the shape of the base of the pad, shaping the piece to the shape of a shoulder to which the pad is to be applied, applying another piece of an elastic material to the first piece so that the second piece conforms to the contour of the first piece, one of the pieces being smaller than the other, and adhering the two pieces only where portions of edges of the smaller piece contact the other piece.

18. The method of making shoulder pads for garments, which comprises the steps of forming a piece of an elastic material to the shape of the base of the pad, shaping the piece to the shape of a shoulder to which the pad is to be applied, applying a smaller piece of an elastic material to

the first piece so that the smaller piece conforms to the contour of the larger piece, and adhering the two pieces only where the edges of the smaller piece are not coincident with the edges of the larger piece, and only where portions of edges of the smaller piece contact the other piece.

19. The method of making shoulder pads for garments, which comprises the steps of forming a substantially triangular piece of an elastic material, shaping the piece to the shape of a shoulder to which the pad is to be applied, applying a smaller piece of an elastic material of substantially the same geometrical shape to the first piece so that the smaller piece conforms to the contour of the larger piece, and adhering the two pieces only where the edges of the smaller piece are not coincident with the edges of the larger piece, and only where portions of edges of the smaller piece contact the other piece.

20. The method of making shoulder pads for garments, which comprises the steps of forming a substantially triangular piece of an elastic material, shaping the piece to the shape of a shoulder to which the pad is to be applied, applying a smaller piece of an elastic material of substantially the same geometrical shape to the first piece so that the base line of the smaller piece is substantially coincident with the base line of the larger piece, and so that the smaller piece conforms to the contour of the larger piece, and adhering the two pieces only where the edges of the smaller piece are not coincident with the edges of the larger piece, and only where portions of edges of the smaller piece contact the other piece.

GERALD A. PRAGER.

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