

[54] METHOD AND EQUIPMENT FOR SEWING

[76] Inventor: Patricia A. Bannister, 540 Bird Ave., San Jose, Calif. 95126

[22] Filed: June 7, 1973

[21] Appl. No.: 367,785

[52] U.S. Cl. 2/243 R

[51] Int. Cl. A41d

[58] Field of Search 2/243 R, 243 A, 243 B, 2/275

[56] References Cited

UNITED STATES PATENTS

2,411,328	11/1946	MacNab.....	2/243 B X
2,657,159	10/1953	Nahman.....	2/243 R X
2,756,434	7/1956	Rick et al.....	2/243 R
2,892,196	6/1959	Pundyk et al.....	2/243 R

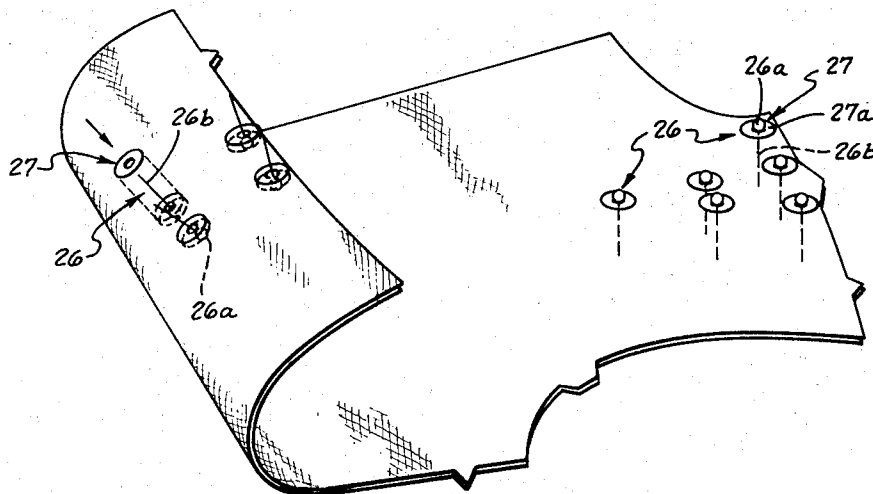
2,922,167	1/1960	Berlin.....	2/243 R X
3,406,407	10/1968	Parlanti.....	2/243 R

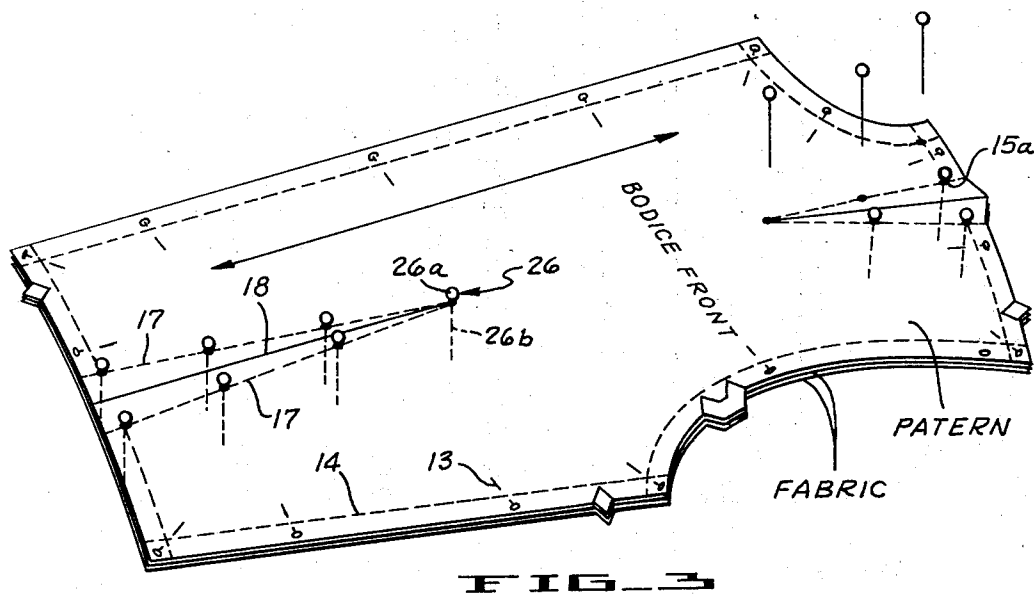
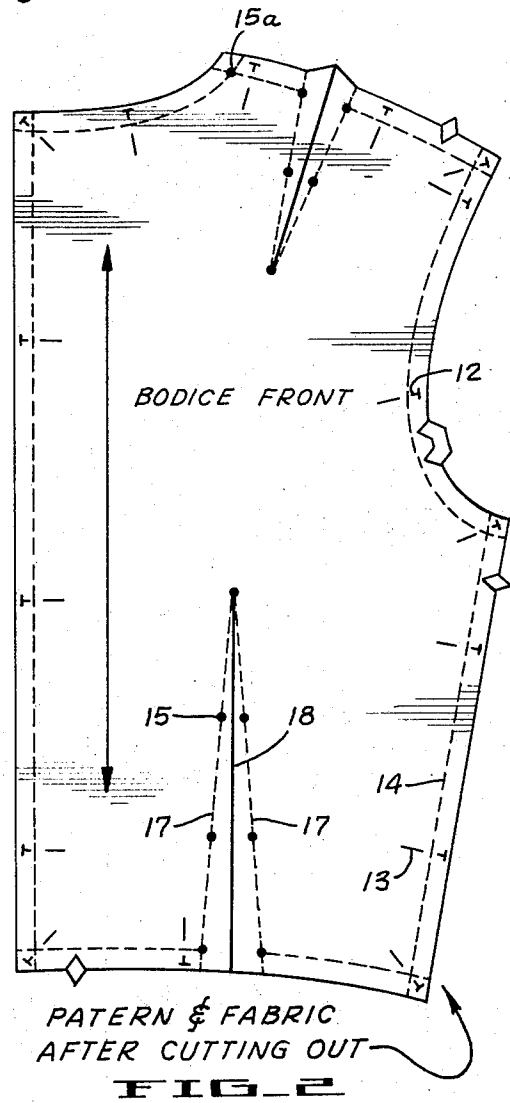
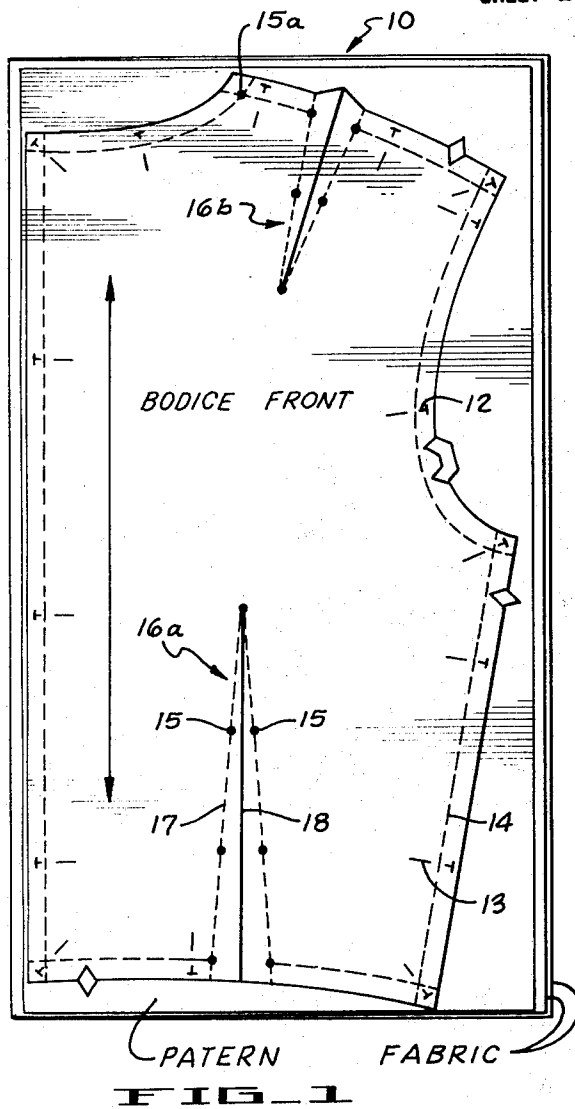
Primary Examiner—Alfred R. Guest

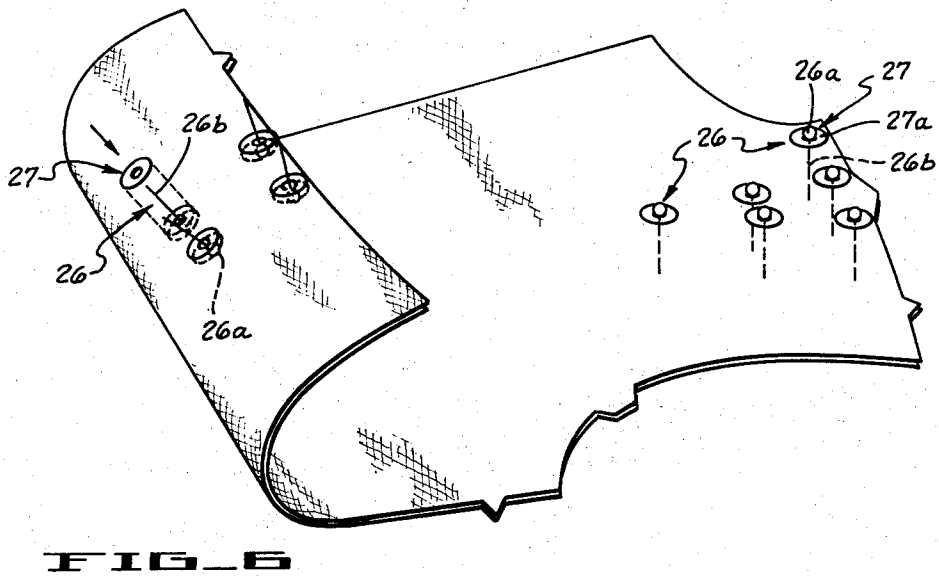
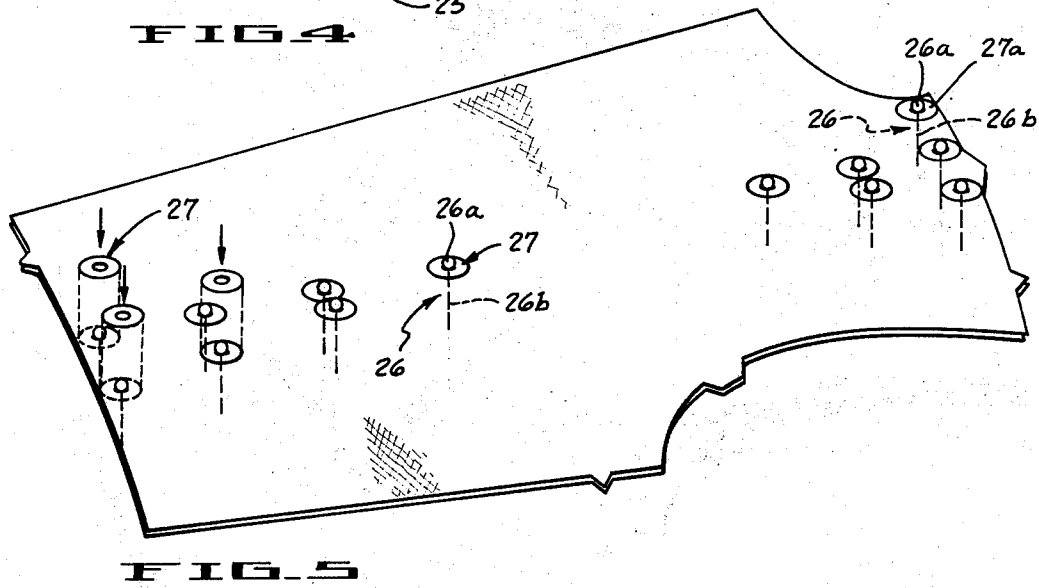
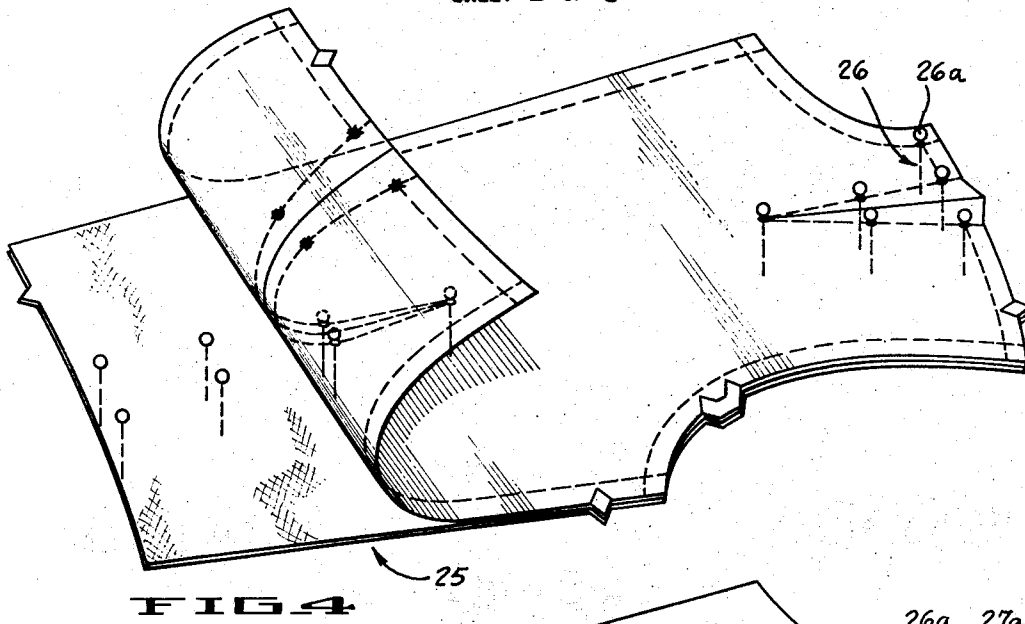
[57] ABSTRACT

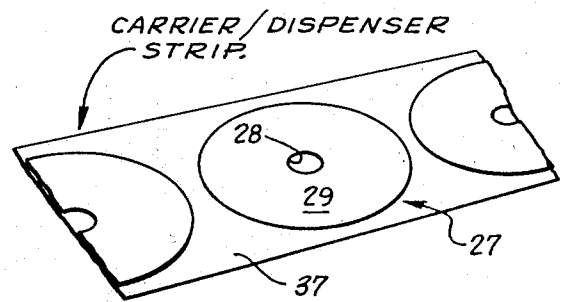
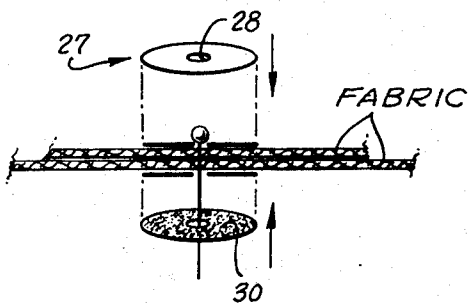
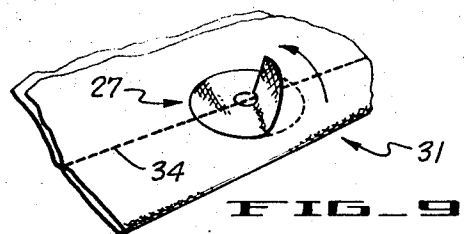
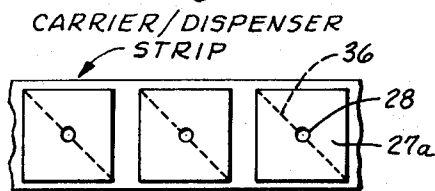
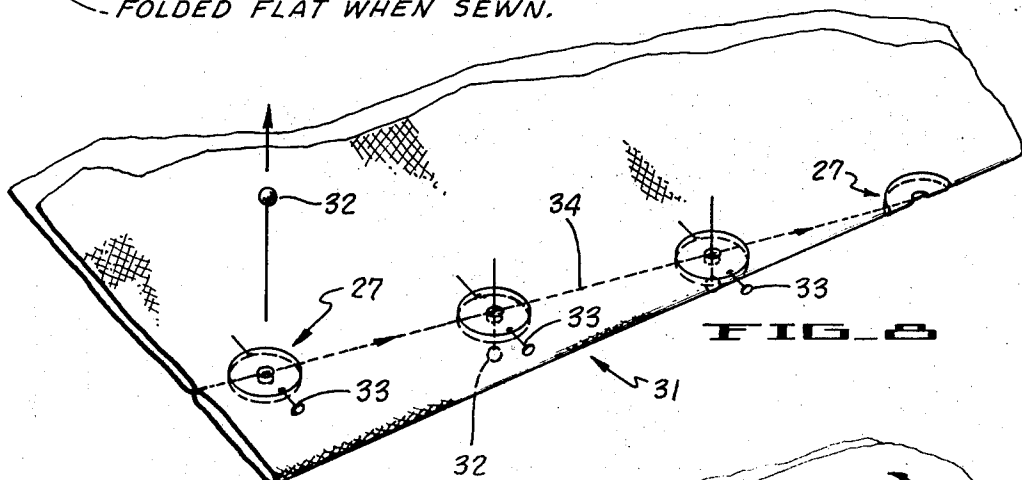
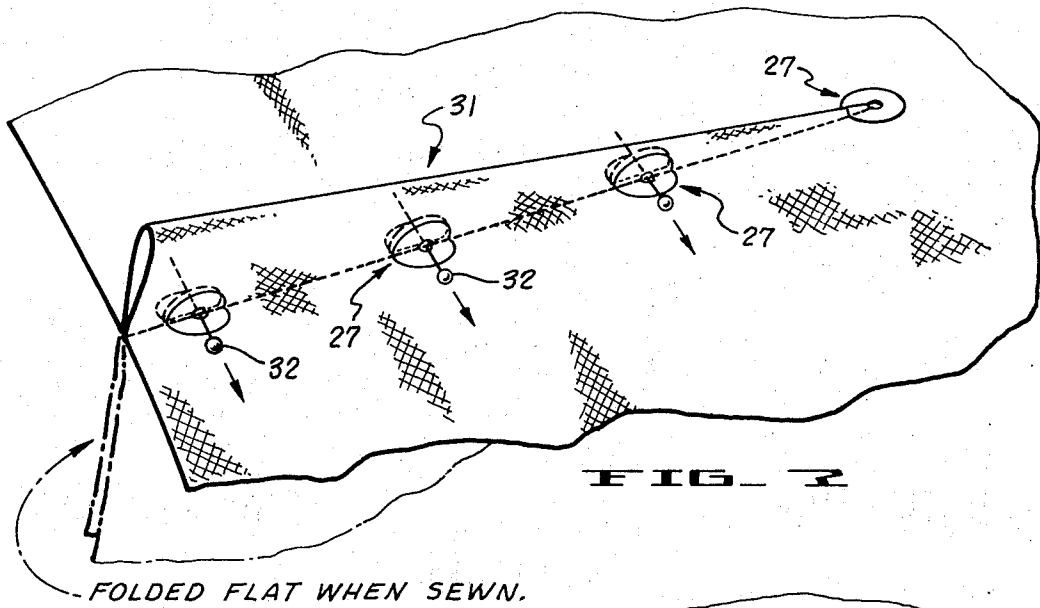
Method of sewing employing a standard pattern with marking dots, applying pins through the pattern and goods at the marking dots, removing the pattern while leaving the pins, applying adhesive rings over each pin so as to adhere to the goods, carrying out any necessary folding (e.g., folding into a dart) along the lines mapped out by the adhesive rings, and sewing along such lines.

3 Claims, 12 Drawing Figures









METHOD AND EQUIPMENT FOR SEWING

This invention relates to a method of sewing and to equipment useful in sewing.

In a typical instance of the field of application of the present invention, the bodice front of a lady's garment is constructed by laying a pattern on one face of a double thickness of the textile material or fabric from which the bodice front is to be made and the pattern is pinned to the folded fabric. The pattern is provided with marks to guide the sewing procedure including, for example, marking dots or perforations which are used to construct darts. It is the function of the darts to provide folds which cause the garment to hang properly. A double thickness of the material is cut while the pattern is pinned to it. In a typical instance, the cutting will proceed around the entire perimeter of the pattern so that two separate thicknesses of fabric are formed which constitute the left half and right half of the bodice front. When the front has been completed, it is sewn along seam lines to the bodice back to form a complete bodice with arm holes, a neck opening and bottom opening for the torso.

Among the operations necessary are the formation by folding and sewing of darts or folds along the bottom edge and shoulders of each bodice front which, as stated above, perform the function of causing the garment to hang properly and to fit properly. Patterns are provided with marking dots such as shown at 15 in FIG. 1 which constitute aids in forming darts.

Several methods are in common use for forming darts, such as inserting pins through the marking dots and marking both sides of the material with chalk. Another method uses what is called tailor tacks, whereby a double thread having a color contrasting with that of the fabric so as to make the thread easily discernible is passed through the fabric at each marking dot to form stitches. The thread is severed to leave segments of double thread at each marking dot. Such methods are subject to considerable difficulties and disadvantages. For example, chalk marks rub off easily, are difficult to apply to some fabrics and are undesirable as applied to very delicate fabrics. Tailor tacking is difficult to apply, especially to the blind side of a double thickness (i.e., the side which faces down while the double thickness of material is supported on a surface such as a table top or sewing table) and it is often difficult to remove the double thread segments after the garment has been completed.

It is an object of the present invention to provide improvements in sewing.

It is a further particular object of the invention to provide a method and equipment whereby sewing operations such as the formation of darts is facilitated, such method being easily carried out, being characterized by accuracy and lacking the disadvantages of previous methods such as the tendency of chalk marks to rub off and difficulty in removing thread segments resulting from the tailor tack procedure.

The above and other objects of the invention will be apparent from the ensuing description and appended claims.

Certain embodiments of the invention are illustrated by way of example in the accompanying drawings, in which:

FIG. 1 is a plan view showing a double thickness of fabric upon which a pattern is laid, the pattern being that of a bodice front;

FIG. 2 shows the double thickness of fabric with the same pattern pinned to it after the fabric has been cut to the outline of the pattern;

FIG. 3 shows in perspective the first step in the procedure of the present invention as applied to the formation of darts in a bodice front, such step comprising application of pins;

FIG. 4 is a perspective view showing removal of the pattern from the fabric while leaving the pins applied in the previous step;

FIG. 5 is a perspective view showing the application of adhesive rings to the fabric, such application being to the front side of the double thickness of fabric;

FIG. 6 is a perspective view showing how adhesive rings are then applied to the blind side of the double thickness of fabric;

FIG. 7 is a perspective view showing how a dart is formed by folding along a fold line and also how sewing is accomplished for forming a seam which, in turn, forms a dart;

FIG. 8 is a perspective view showing how the dart is sewed;

FIG. 9 is a perspective view showing how the marking rings are removed after a seam has been formed;

FIG. 10 is an exploded view showing how the adhesive rings are applied to a double thickness of fabric;

FIG. 11 is a perspective view showing a strip carrying adhesive rings employed in the method of the present invention and how the rings may be provided and dispensed.

FIG. 12 shows an alternative (non-circular) ring.

Referring now to FIGS. 1 and 2, a double thickness of fabric formed by folding the fabric with the wrong side (i.e., the inside of the completed garment) facing out is shown at 10 folded along fold line 11. On the upper face of the fabric is pinned a standard paper pattern 12 by means of common pins 13 which preferably are inserted along a seam or stitch line 14. Marking dots are shown at 15 which form two dart patterns 16a and 16b for the bottom and the shoulders of the bodice front, respectively. The marking dots 15 are located along seam lines 17. Fold line 18 is also shown.

With the pattern pinned to the fabric as shown in FIG. 1, the fabric is then cut out along the perimeter of the pattern to provide a double thickness of fabric which is more clearly shown at FIGS. 4, 5 and 6, and is indicated by the reference numeral 25. (The bodice front may be made in one piece rather than two, in which case the pattern 12 will have its left-hand edge, as viewed in FIG. 1, flush with the fold line 11 and only the top, bottom and right side of the fabric will be cut. When, as shown, the bodice front is made in two parts, the two parts (left and right) will be sewn together before the garment is completed.)

Thus far, the application and use of the pattern are conventional. The next step, and the first in the practice of the present invention, is illustrated in FIG. 3. Pins 26 are inserted transversely through each of the marking dots 15 so that their heads 26a remain above the pattern and their shanks 26b extend through the pattern and through both thicknesses of the fabric.

Referring now to FIG. 4, the next step in the method of the present invention is to remove the pattern, doing so carefully so as to prevent removal of any of the pins

26. This, however, is not a difficult step because the pins will ordinarily have small heads which will pass easily through the thin material of the pattern.

The next steps in the procedure of the invention are shown in FIGS. 5 and 6. As will be seen in FIG. 5, a double thickness of the material cut to the outline of the pattern has no markings on it other than the pins 26 which are arranged in accordance with the pattern of marking dots of the pattern. Rings or perforated discs 27 are then placed over the pins 26 on the top side of the fabric. These rings are shown in greater detail in FIGS. 10 and 11. As will be seen, each ring 27 is formed with a center hole 28 in its body 29 and one side of each of the rings 27 is coated with an adhesive material 30, preferably a pressure-sensitive adhesive, although a dry adhesive which requires moistening may be used. The rings 27 are preferably circular but other shapes may be employed. They are preferably made of paper although they may, if desired, be made of cloth, plastic, metal foil, or any other suitable material. The adhesive material 30 is preferably a pressure-sensitive adhesive many of which are well known, such as polyisobutylene, styrene-butadiene, and polyvinyl isobutyl ether.

The next steps are illustrated in FIGS. 7 and 8. The double thickness of fabric is separated and the pins 26 are removed. Each half of the bodice front will have, of course, a triangular pattern of rings 27. The manipulation of one set of rings is illustrated. (Each set of rings outlining a bottom dart and a shoulder dart will be manipulated similarly). The fabric is folded along a line 31 bisecting the pattern of rings 27 and, to assure proper folding and to secure the fold, pins shown at 32 are passed through the center holes 28 of matching rings 27. Then the single thickness of fabric is folded as indicated by the broken line in FIG. 7, the fabric is laid flat, as shown in FIG. 8, horizontal pins 33 (i.e., pins in the plane of the fabric) are passed through the rings 27 and the vertical pins 32 (i.e., the pins transverse to the plane of the fabric) are removed. The rings 27 on the top side of the folded fabric provide a guide for a seam line 34 and sewing is commenced along such line. However, no marking of the fabric is required. The rings 27 may be conventional reinforcement rings because of their ready availability, such as rings used to reinforce the perforations of sheets of paper in loose leaf binders. However, such rings are purposely made strong and difficult to tear, whereas for the present invention a thin, easily torn paper is preferred because, as will be seen from the description below, the rings are sewn through and then removed. A strong, tough paper ring is harder to sew through than an easily torn ring. Moreover, it is preferred that center opening 28 be smaller than the openings of the usual reinforcement rings. Circular openings 28 having a diameter of about one-eighth inch are advantageous. Instead of employing openings as at 28, the rings 27 may be marked with dots provided the material from which the rings 27 are constructed is such that it is easily punctured by the head of a pin. Moreover, the rings 27 need not be circular; they may, for example, be square or triangular or even of irregular shape. In FIG. 12 there is shown a tape having square rings 27a with center openings 28a and perforated at 36 to facilitate tearing and removal.

Referring again to FIGS. 5 and 6, as stated one of the rings 27 is placed over each of the pins 26 and is ap-

plied by pressure to the fabric such that the pattern of the pins is duplicated by the pattern of the rings applied to the fabric. One of the important advantages of the present invention is illustrated in FIG. 6, wherein as will be seen, the double thickness of fabric is lifted or turned over and rings 27 are applied to the protruding shanks of the pins and pressed onto the fabric so as to duplicate the ring pattern on the blind side or underside of the double thickness of fabric. Inasmuch as the protruding shanks of the pins are accurately placed, it follows that the pattern of rings applied to the blind side will also be accurately placed by this procedure.

If the sewing machine employed is of a common type which can sew over the transverse pins 33 (see FIG. 8), sewing will be accomplished in such manner and after the seam is completed the pins 33 are removed. If the machine employed is not of a type capable of sewing over pins such as those at 33, the sewing will proceed in steps in which sewing will be completed up to one of the pins 33 which will then be withdrawn and the sewing continued to the next pin, etc. As will be seen in FIG. 9, the sewing acts to sever each of the rings 27 into two parts, which facilitates removal of the rings after the sewing has been completed.

It will be apparent that this manner of sewing can be applied to all kinds of sewing operations including, for example, sewing long seams requiring the aid of marking dots on the pattern. The ring 27a shown in FIGS. 4 and 5 and the associated pin correspond to a marking dot 15a in FIGS. 1 and 2 and serve to align a collar or facing (not shown).

The rings 27 may be conveniently dispensed by attaching them to a tape 37 from which they can be readily detached; see FIG. 11.

It will therefore be apparent that a novel and useful method and equipment for sewing are provided.

I claim:

1. In the process of sewing fabric wherein a pattern is affixed to a piece of fabric, such pattern having marking indicia thereon to serve as sewing guides for the construction of seams, darts and the like, the fabric is cut to the outline of the pattern and the fabric is marked in accordance with said marking indicia to form directly on the fabric a pattern in accordance with such indicia, the pattern is removed from the fabric and the fabric is sewn in accordance with the pattern of indicia, the improvement which comprises applying pins to the fabric transversely through the pattern and fabric at the aforesaid marking indicia, removing the pattern while leaving the aforesaid pins extending through the fabric, applying to at least one side of the fabric a pattern of adhesive rings in accordance with the pattern of said marking indicia by impaling each ring on one of said pins and attaching it adhesively to the fabric, removing the aforesaid pins and completing the sewing operations including folding and sewing of seams in the normal manner but using the pattern of rings as guides, and thereafter removing the rings when they have served their purpose.

2. The process of claim 1 wherein the rings are of paper and each ring has a pressure-sensitive adhesive applied to one side and is formed with a hole to receive a pin.

3. The process of claim 2 wherein the paper is of a quality that is easily torn.

* * * * *