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S. LAMPORT
METHOD OF PREPARING SAIL FABRIC STRIPS
OF SYNTHETIC RESIN MATERIAL

3,118,801

Filed June 16, 1959

2 Sheets-Sheet 1

FIG. 1

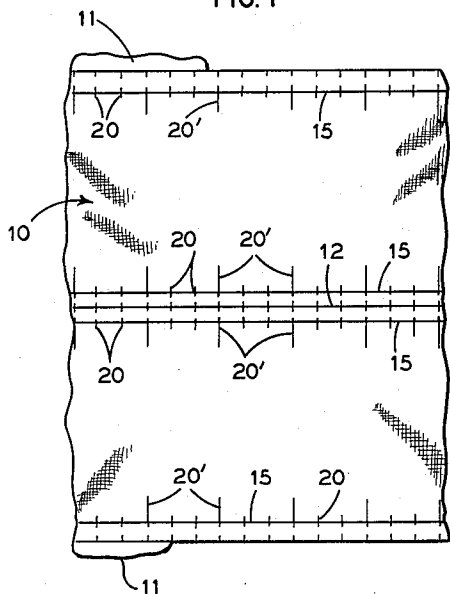


FIG. 2

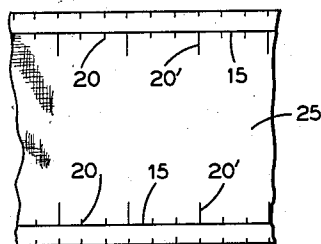


FIG. 4

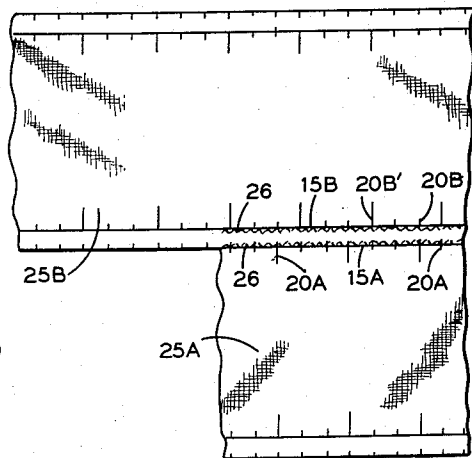
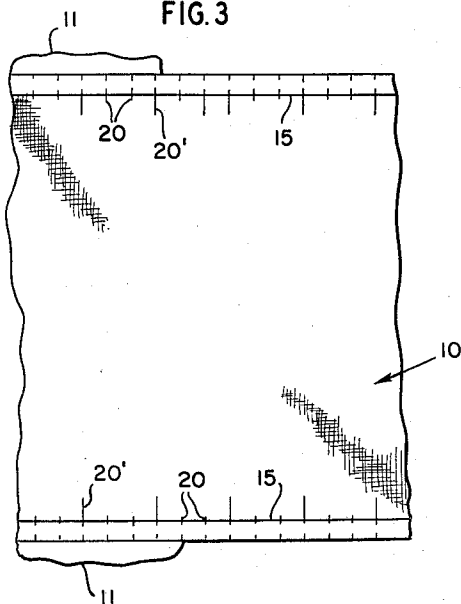


FIG. 3



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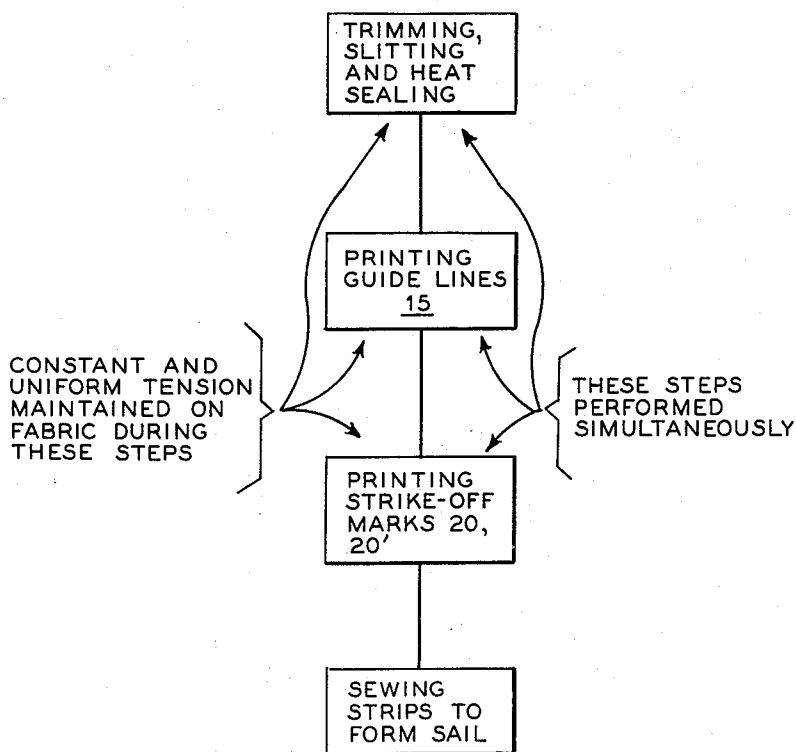


FIG. 5.

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METHOD OF PREPARING SAIL FABRIC STRIPS
OF SYNTHETIC RESIN MATERIAL
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1 Claim. (Cl. 156-88)

This invention relates to an improved fabric for sail making and, more particularly, to an improved method of making sails utilizing a novel fabric having pre-printed thereon guide lines and strike off marks so that a substantial part of the work of making a sail is eliminated and a better sail is produced having straighter seams sewn under more uniform tension.

In the present manner of making sails, a diagram of the sail is drawn on the floor of the sail loft or other suitable flat supporting surface, and fabric is laid in to cover the diagram and cut to size. This fabric comes in widths of about 38" and is trimmed and, if necessary, slit to form strips of the desired width, such as 18" by way of one example. The width of the strips depends upon the weight of the fabric and the type of sail to be cut or sewn. As the strips are laid in, they are tacked to the support surface or weighted and "strike off" marks are made across the edges of adjacent strips or widths. These marks, which are usually spaced from 6" to 18" apart, must be straight and true to the thread line so that, after tabling of the widths for sewing, the marks on adjacent widths will meet in true rectilinear relation.

After the strike off marks are applied, the widths or strips, having been cut to length, go to a long table where a line is drawn parallel to at least one edge of each strip and spaced about 1/2" inwardly from such edge. In sewing the sail with adjacent strips overlapped at their adjacent edges, the operator uses these lines as guide lines for the overlapping and maintains the strike off marks aligned to assure proper tension in the fabric along the seamed edges. With the strike off mark of adjacent strips in alignment, the tension from strip to strip should be uniform.

Under the present system using strike off marks at an average spacing of about 12", the sewing machine operator lets the machine tension control the tension of the fabric and adjusts or lines up the fabric only at the strike off marks. This produces tight and slack sections along the seams resulting in unevenness of the sail.

In woven cotton fabric formerly used for sails, a blue line was woven 1/2" from the selvage and, since cotton sail fabric was used in the greige without further finishing, the woven line could be used as a guide for the overlapping of adjacent strips, but marking of strike off marks was still necessary. With the advent of sails of synthetic fabric, notably heat sealable synthetic resin material, such as, for example, that sold under the trademark "Dacron," it is no longer possible to weave a guide line in the selvage, and today almost all sails are made of such synthetic fabric.

In accordance with the present invention, a very substantial reduction in the work required to lay out, cut, and sew a sail is effected with a substantial improvement in the finished sail making the latter straighter and to set better, and without any necessity of re-cutting to eliminate wrinkles, etc.

More specifically, in accordance with the invention, guide lines and uniformly spaced and aligned guide or strike-off marks are imprinted on each edge of each strip of fabric as the initial width of fabric is trimmed and, if necessary, slit to form strips of the desired width. While the trimming and, if necessary, the slitting, together with such printing, are being effected, the initial width and the resultant marked strips are maintained under uniform tension, as by weighting or in other ways known to the

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art, so that the strike off marks are accurately uniformly spaced from each other. The cutting and trimming are effected with heated knives so as to seal the edges of the strips.

For an understanding of the invention principles, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

FIG. 1 is a plan view illustrating the simultaneous slitting and marking of the initial width of material;

FIG. 2 is a plan view of a trimmed and marked width produced by the operation of FIG. 1;

FIG. 3 is a view, similar to FIG. 2, of a width formed by trimming and imprinting without slitting;

FIG. 4 is a plan view of two seamed adjacent widths; and

FIG. 5 is a flow sheet of the invention method.

Referring to FIG. 1, the sail material, which is woven from a synthetic fiber, comes in an initial width 10 substantially 38" wide between selvedge edges 11, 11. This strip may be slit and trimmed to form two strips 18" wide.

In accordance with the invention, as fabric 10 is being slit along a center line 12, it is printed with guide lines 15, 15 spaced from 1/2" to 1" from line 12 dependent upon the unit weight of the fabric. Corresponding lines are also printed along the outer edges of the strip at distances 17" to 17 1/2" from line 12. At the same time, strike off marks 20 are printed at 2" intervals along each edge of fabric 10 extending inwardly beyond the printed lines parallel to the edges, and also along line 12 extending beyond lines 15. These strike off marks are exactly perpendicular to lines 15. Every third strike off mark may be printed longer and heavier, as at 20', for ready visual observation of the length of fabric sewn.

The trimming and any slitting are done with heated knives, thus providing heat sealed edges for the resulting printed sail strips 25 (FIG. 2). During the slitting, trimming and printing of the fabric, the latter is maintained at a uniform tension so that the strike off marks 20 remain at uniform spaced intervals.

FIG. 3 illustrates the fabric 10 as trimmed and printed without being slit. In this case, the guide lines 15, 15 and the strike off marks 20, 20' are imprinted only along the edges of the width and while the width is being trimmed to size by removing the selvage to the desired width.

To form a sail, a strip of printed fabric 25A is pinned or weighted in position, and cut to size at each end. A second strip 25B is then laid along side of, and overlapping strip 25A and with its edge exactly coincident with line 15A. Strip 25B is stretched so that its strike off marks 20B are exactly aligned with strike off marks 20A, is pinned or weighted in place, and is trimmed to length. The procedure is repeated until all the required strips have been so positioned and trimmed to length.

The strips are then taken to a sewing station and seamed together, as by using a cross stitch machine. During such sewing, each strip, such as 25B, is positioned with its edge coincident with the line 15A of strip 25A, and marks 20B are maintained exactly aligned with marks 20A. Two strips are joined together by seams 26, 26.

The distance apart of strike off marks 20 is always 2" irrespective of the fabric weight. However, the spacing of guide lines 15 from the strip edges varies with the unit weight of the fabric as follows.

Unit weight:	Distance from edge, inch
2 oz. to 5 oz. -----	1/2
6 oz. to 8 oz. -----	3/4
9 oz. to 11 oz. -----	7/8
12 oz. and over -----	1

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It will be noted that the manual marking of strike off marks and guide lines is completely eliminated. In addition both the strike off marks and the guide lines are more accurately located and better oriented.

While a specific embodiment of the invention has been shown and described in detail to illustrate the application of the invention principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

I claim:

The method of preparing sail fabric strips of heat sealable synthetic resin material, for assembly to form a sail by seaming together plural strips of said fabric, comprising the steps of trimming the selvage from the longitudinal edges of untrimmed strips of the material to provide a trimmed strip substantially uniform in width throughout its length, while maintaining the strip under uniform constant tension during the trimming step; simultaneously with the step of trimming said longitudinal edges, heat sealing said edges; simultaneously with trimming and heat sealing said edges, and while maintaining the strip under said uniform constant tension, imprinting guide lines longitudinally of the strip and in uniform

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spaced parallel relation to the trimmed edges of the strip, the distance of each guide line from its associated trimmed stepped edge being coordinated directly with the unit weight of the material; and simultaneously with the printing of said guide lines, and while maintaining the strip under said uniform constant tension, imprinting relatively short, laterally extending guide marks along each guide line and along each trimmed edge, the guide marks being aligned laterally of the strip and being disposed at uniform short longitudinal spacings from each other.

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