

[54] TEXTILE GUIDING AND MEASURING INDICIA

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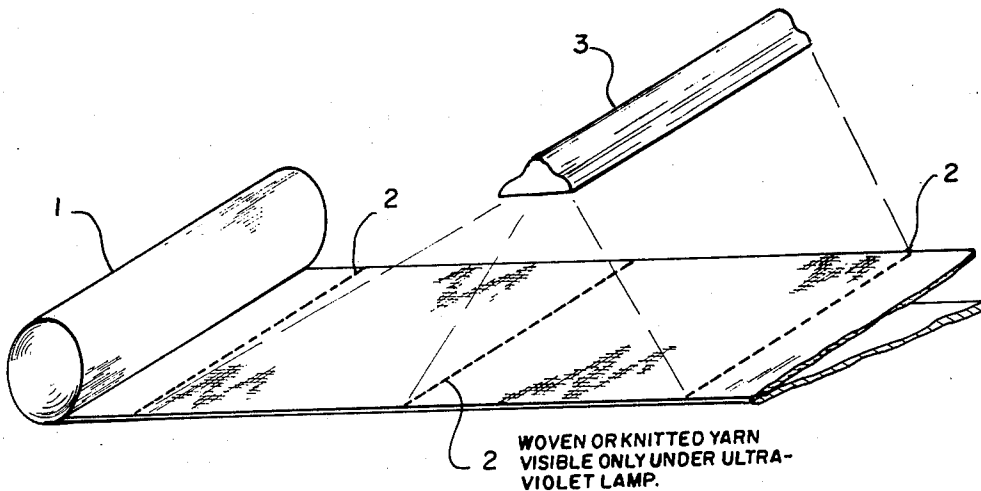
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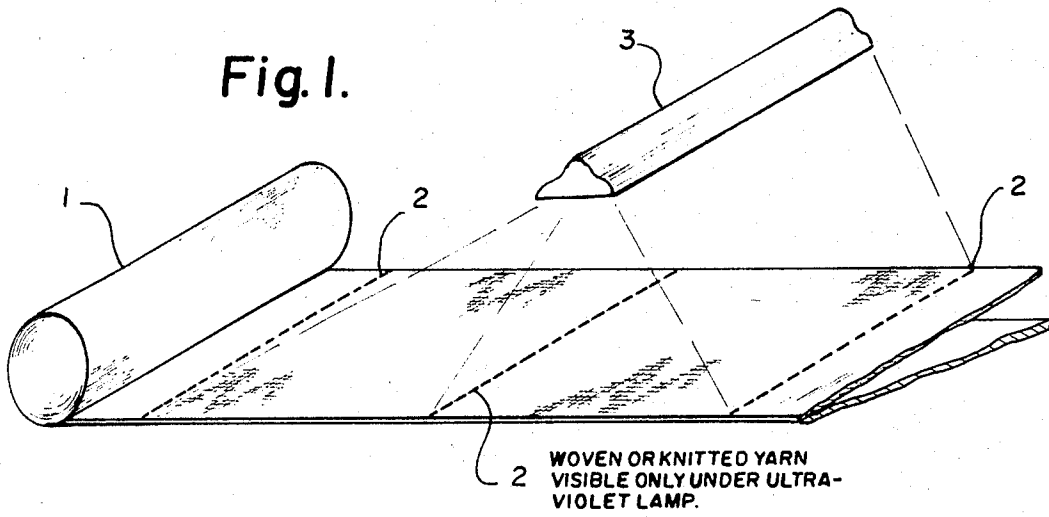
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[57] ABSTRACT

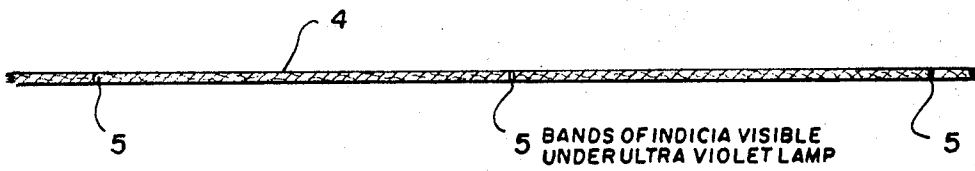
This invention relates to the impregnation of spaced courses of yarn in a fabric with a material which is not visible under daylight but which is visible only when subjected to ultra-violet light, so as to provide guide lines for cutting, or measuring indicia to enable visual counting of the number of yards of cloth in a roll from the end thereof without the necessity of unrolling the bolt.

2 Claims, 2 Drawing Figures





**Fig. 2.**



## TEXTILE GUIDING AND MEASURING INDICIA

This invention relates generally to textiles and, more particularly, to woven and knitted materials and cloth having guiding or measuring means.

An outstanding disadvantage encountered by salesladies, dressmakers, distributors and tailors, when cutting cloth, is there are no truly suitable guide lines to accurately guide the cutting operation or to indicate measured lengths. For example, when a saleslady sells a yard or more of material, she must unroll it from a very large bolt of cloth and use a rule for measuring the amount desired to be cut. Inaccuracies in measurement occur since the dispensed piece of cloth may be under varying degrees of tension when cut. Also difficulty is encountered in cutting along a straight line at right angles to the rolled strip of cloth and following the weave.

Particular difficulties also arise during times that inventory is taken, that is, when determining the amount of material left on various rolls of cloth. It becomes necessary to completely unroll each roll and measure the length thereof, then reroll the bolt, which, of course, is a very tedious, time consuming and costly undertaking.

After the cloth is cut and taken home by the housewife for the purpose of making a garment, difficulties are involved in attaching and maintaining in registry a pattern to a piece of cloth and in accurately cutting along lines to match those of the pattern, particularly when the cloth is over or under tensioned or is somewhat distorted.

Attempts have been made in the past to overcome such objections by marking the cloth with crayon guide lines for cutting, however these have not been truly successful since they not only leave undesirable markings but inaccuracies still arise in drawing lines on cloth to guide the cutting operation.

An object of the present invention is to provide a novel means and method for overcoming the above-named disadvantages by providing uniquely accurate guide or measuring lines in cloth or similar items.

A more specific object of the present invention is to weave spaced yarns in cloth which are not normally visible to the naked eye under visible light and which leave no undesirable marks on the cloth.

A still further object of the present invention is to mark or impregnate a thread, prior to knitting it into the cloth so as to provide spaced courses of marked threads along parallel lines at a predetermined distance apart to indicate a predetermined dimension or spacing, such as a yard or foot, etc.

Another object of the present invention is to provide a woven or knitted fabric with markings at spaced intervals, such as along parallel wof (or weft) threads, extending across the entire width of the cloth, inclusive of the selvage edge so that upon inspection of one end of the roll of cloth, the marked threads may be counted so as to give an indication of the total length of cloth in a particular roll, thus greatly facilitating taking inventory.

Another specific object of the present invention is to provide, in a knitted piece of cloth, spaced threads which have been sprayed, brushed, or immersed with coating of fluorescent material which is invisible when subjected to visible light but which becomes visible only when subjected to ultra-violet or black light, so as

to provide suitable invisible lines, either serving as guide lines for cutting the cloth or for the purpose of obtaining measured lengths of cloth from a roll.

Other objects and advantages will become more apparent from a study of the following description, taken with the accompanying drawing wherein:

FIG. 1 is a perspective view of a strip of woven cloth embodying spaced guide or measuring lines according to the teachings of the present invention; and,

FIG. 2 is a side view of a rope embodying the present invention.

The present invention is applicable to all woven and knitted materials including cotton, wool, rayon, nylon, polyester, etc. and combinations thereof.

Referring more particularly to FIG. 1 of the drawing, numeral 1 denotes a roll or bolt of cloth having spaced woven or knitted courses of yarn 2 impregnated with a fluorescent material immediately before the weaving or knitting process. FIG. 2 shows a rope 4 having bands 5 of such material. This material is visible only under ultra-violet or black light emitted by ultra-violet lamp 3. Spaced, parallel courses of yarn 2 are a predetermined distance apart, (1 foot or 1 yard, etc.). Yarn 2 may be passed over a brush saturated with fluorescent material in dry or liquid form, or it may be passed through a bath of liquid fluorescent material, or perhaps a spool of thread which has already been treated with fluorescent material may be used instead.

The fluorescent material is a liquid, powder or paint which is not visible when viewed under visible light when woven or knitted into a piece of cloth but which will fluoresce and become visible only when subjected to ultra-violet or black light. It should be transparent or colorless so as not to be seen under visible light, or, at least, it should be of the same color as the knitted cloth.

The portion of radiation with frequencies greater and wave lengths shorter than those of visible light is known as the ultra-violet region. The familiar continuous spectrum of visible light ranging from red to violet can be produced by passing the light from an open arc through a quartz prism and allowing it to fall on a cloth surface. However, if it is allowed to fall on a fluorescent screen, the spectrum will extend beyond the visible and into the region of the ultra-violet. This spectrum area extends over three octaves of the scale of radiation frequency, arranging roughly from 4,000 angstrom units to below 400 angstrom units.

Fluorescent and mercury lamps can be filtered so that visible energy is absorbed and emission is primarily in the near ultra-violet or black light spectrum having a wave length region of between 3,200 and 4,000 angstrom units. The ultra-violet energy emitted is used to excite fluorescent pigments in paints, dyes, or natural materials to make them readily visible when viewed under ultra-violet light.

Phosphorescent materials, excited by ultra-violet energy daylight or light from electric lamps, have been shown to have a high brightness of after glow for periods of from 6 to 9 hours and some for as long as 24 hours after the exciting source has been removed. Certain phosphorescent materials, generally combinations of calcium and strontium sulphides, can be used for coating or saturating the marking or guiding threads before being knitted into the cloth or textiles.

Therefore, the sulphide phosphors will emit light when exposed to ultra-violet energy.

While guide threads of predetermined spacings, such as 1 foot or 1 yard apart, have been described, it will be readily apparent that perhaps such threads can be woven into the fabric along non linear patterns to enable the housewife or tailor to cut along irregular shaped lines during dressmaking.

Although woven materials have been described as embodying the guiding or measuring of knitted threads, such ultra-violet excited threads may be incorporated in other items such as rope, twine, ribbon, wire, insulation, etc. such as by markings every ten feet or other suitable intervals for either denoting measurements to assist in cutting measured lengths or for purposes of identification by color codes for identifying a particular rope construction, etc.

Instead of impreganting a course of yarn in a knitted or woven fabric, it is possible to merely paint on or impregnate only a spot of the yarn at both sides of the strip, at the selvage edges, to give the same measuring or cutting guide marks.

In rolling bolts of cloth, the cloth is often folded along a longitudinal medial line and then rolled. In such roll, the above described spots may be more conveniently located on the folded edge to be more easily counted when taking inventory of the length of cloth in the roll.

Salespersons must give extra lengths of cloth to assure that they are not cutting at an angle or pulling un-

evenly. With the present invention, such extra length is not necessary, therefore saving costs.

The present invention is useful for textiles generally, such as rugs, wherein similar identification courses or similar dots along the selvage edges may be used either for measuring or for denoting measured lengths.

While I have illustrated and described several modifications of my invention, it will be understood that these are by way of illustration only and that various changes and modifications may be contemplated within the scope of the following claims.

I claim:

1. A bolt of cloth having evenly spaced rows of yarn embodied in the cloth and extending at right angles to the length of the cloth, which rows are impregnated with a material which is visible under ultra-violet light and invisible under ordinary daylight, said rows being spaced apart in units of measurement to give a visual indication, when subjected to ultra-violet light, of guide lines along which to cut the cloth in measured lengths.

2. A bolt of cloth as recited in claim 1 wherein said cloth is folded along a longitudinal center line, whereby upon inspection of one end of the bolt and counting the number of indicia of said material along the fold, the length of cloth can be quickly determined.

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