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# UNITED STATES PATENT OFFICE.

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## TEXTILE FABRIC AND METHOD OF MAKING SAME.

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My invention relates to textile fabrics and to a method of making same and it is an object of my invention to provide a fabric of the kind described the edges of which are not subject to fraying.

Fraying is a very undesirable property in fabrics which are cut into strips, such as muslin bandages, etc. It has already been proposed to overcome the tendency to fraying by providing such articles with solid selvages but this is rather expensive and therefore does not pay in all cases, and it has also been proposed for cheaper materials to impregnate the edges of the bandages etc. with a chemical, for instance, a solution of acetyl cellulose. However, this method involves the drawbacks that it increases the cost of the article as regards material and labour, the edge often becomes too hard and too thick and it cannot be avoided to impregnate the weft threads so that the impregnated edge interferes with the proper use of the article.

I have found that fabrics of any kind may be provided with a solid and durable edge in a very simple manner and without material increase of cost by weaving into the fabric at those points where it is to be cut, threads of a material which is soluble in a suitable solvent. When the fabric is treated with such solvent the threads will become sticky and fraying will be prevented after the fabric has been cut into strips.

The same effect may be achieved in a less convenient manner by placing threads of a soluble nature on the fabric and causing them to become sticky. On the other hand, this method involves the advantage that pieces of any desired configuration may be cut from the fabric and their edges may be solidified by threads of a soluble nature placed on the fabric along the contours of the pieces.

Generally, threads of artificial silk are suitable as soluble threads if made from cellulose acetate. It is well known that such threads are readily soluble in acetone or acetic ester. By weaving one or more such threads into the fabric along the edges and treating the fabric with a solvent by means of any moistening device where the threads are inserted, the threads will stick almost instantaneously and the fabric is so solidified at these points that fraying is absolutely prevented. The threads of artificial silk should be moistened superficially only so that they will not be dissolved completely but remain in position and become firmly connected with the fabric. The threads of cotton or the like are then unable to slip past the threads of artificial silk and fraying is prevented.

It is a very important feature of my invention, particularly as applied to bandages of muslin, that the layer of artificial threads along the edges of the bandage is so thin that it will leave practically unaltered the character of the threads in the fabric and notwithstanding this will prevent fraying.

Instead of threads of artificial silk as described by way of example, where the treatment with solvents effects a water-insoluble impregnation along the edges, threads of any other material may be used. Such threads may include thread forming cellulose derivatives including cellulose acetate and cellulose nitrate or other cellulose derivatives which can be converted into useful textile threads as is done in the manufacture of artificial silk therefrom.

I claim:

1. A fabric comprising a body of textile threads insoluble in organic solvents and an edging of textile threads soluble in organic solvents, said soluble textile threads being adherent to the body fabric and to each other.

2. A fabric adapted to be cut into strips consisting of areas woven with textile threads insoluble in organic solvents and spacing areas between said first mentioned areas woven of textile threads soluble in organic solvents, said soluble textile threads being adherent to each other and to the threads of the insoluble area.

3. The method of making fabrics which will not fray when cut into strips comprising weaving threads of material soluble in organic solvents but insoluble in water in the edging of the fabric and applying an organic solvent thereto.

4. The method of making fabrics which

will not fray when cut into strips comprising weaving threads of material insoluble in water but soluble in organic solvents into the fabric and applying an organic solvent thereto.

5. A fabric adapted to be cut into strips comprising textile threads insoluble in organic solvents for thread-forming cellulose derivatives and an edging of threads composed of cellulose derivatives.

In testimony whereof, I have signed my name to this specification.

WILHELM SPONHOLZ.