

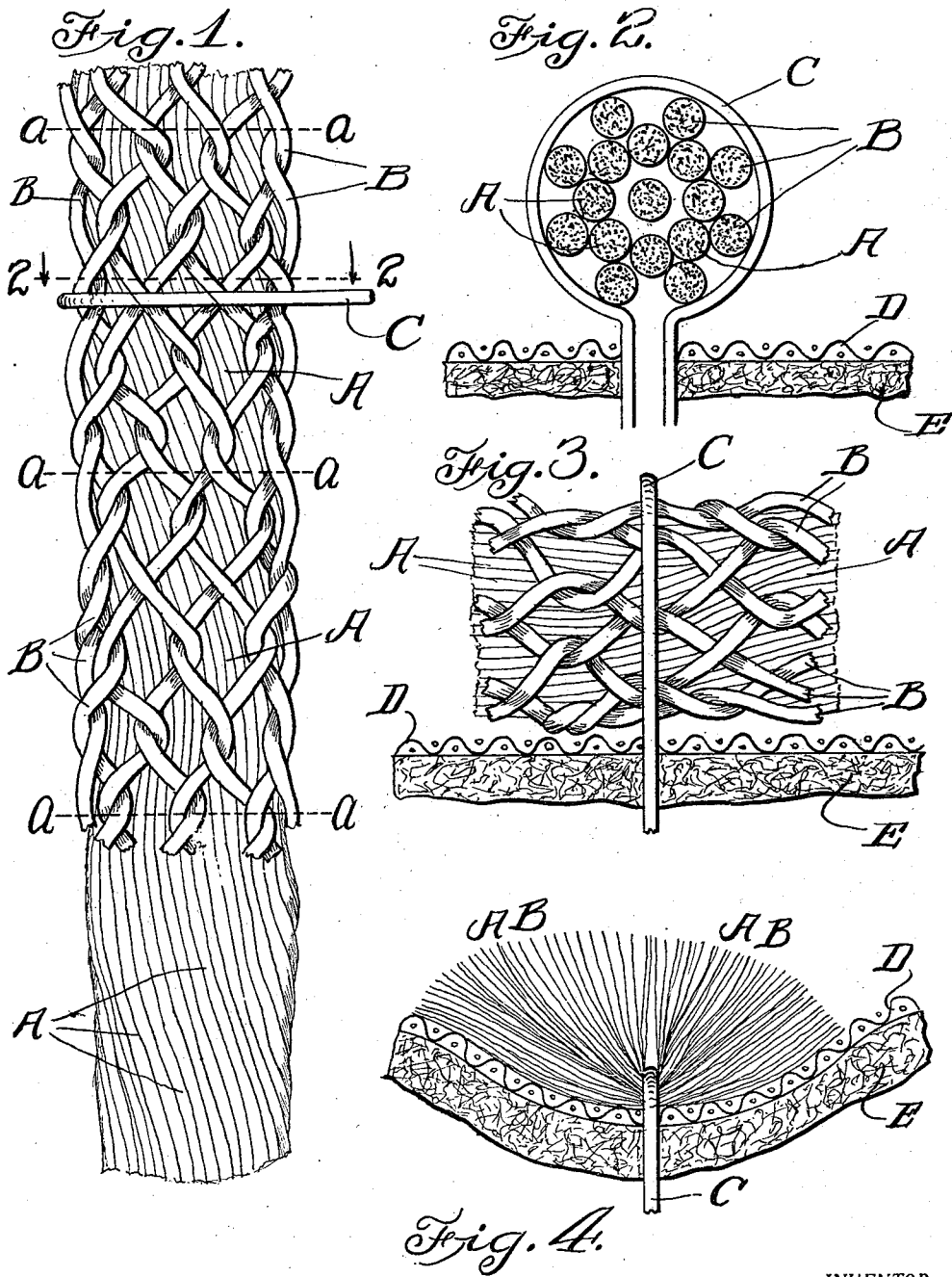
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MATTRESS TUFTING

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MATTRESS TUFTING.

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This invention relates to an elongated, soft fiber structure and to the method of forming and applying sections of said structure to bed mattresses, said structure being adapted to be cut into sections to form tufts for trying bed mattresses, such trying being done by looping threads transversely through the mattress and placing tufts into the thread loops to prevent the thread from being drawn back through the mattress. The use of tufts is old in the mattress making art. This invention relates to the manner of producing the tufts, the resulting tufting structure and tufts being in new form.

The object of the invention is to produce an elongated or rope-form tufting material or structure which is adapted to be delivered to the places on the mattress where tufts are to be attached and the structure there cut transversely into sections of desired length to constitute tufts.

Tufting machines now in use operate by feeding tufting material through a tube into the thread loop on the mattress and then cutting the material to make a mass or bunch of the material of the desired length to constitute a tuft.

By means of my improvement, the tufting structure is of cylindrical cross section and comprises an inner body of cotton yarn strands arranged parallel to each other and other cotton yarn strands surrounding said body and braided in sufficient number to give said structure sufficient coherence for convenient packing and shipping and other handling and for feeding through such a machine, the braiding being open or loose as and for the purpose hereinafter described.

In the accompanying drawings,

Fig. 1 is a side elevation of a tufting structure embodying my invention, a part of the braiding being omitted;

Fig. 2 is a transverse section on the line, 2—2, of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a side elevation of a piece of the tufting structure cut to the length for a tuft and resting on a piece of the mattress and in a trying thread loop;

Fig. 4 shows the parts of Fig. 3 with the thread loop drawn downward far enough to indicate the positions which the ends of the strands of the tuft will take when the trying has been completed.

Referring to said drawings, A, A are a

group of cotton strands placed parallel and against each other, and preferably twisted, to form a cylindrical body or core. The body of strands is surrounded and held in position by similar or like strands, B, B, extending lengthwise of the structure and braided.

This structure is formed by the aid of any braiding machine which is adapted to carry forward the parallel strands, A, A, and braid the strands, B, B, around the strands, A, A.

An important feature of the structure consists in braiding loosely around the strands, A, A. The braiding strands are not drawn tightly around the body of strands, A, A, and the braiding strands are not placed closely against each other as is the case in other tubular braiding. In other words, this braiding is loose and of open or relatively large mesh. In its preferred form, this braiding is composed of only a sufficient number of strands placed only near enough to each other and drawn only sufficiently to the core of strands, A, A, to give the finished structure such coherence or stability as is desirable for convenient packing and other handling and for feeding through the tufting machine into tying thread loops, C, on the mattress. This procedure is for the purpose of rendering the finished tufts soft and fluffy when applied to the mattress. The inner or body strands, A, A, merely lying against each other, are free to spread and bend and present their ends outward when the tying thread is drawn. At the same time the braiding strands, B, in the tuft are so short as to permit the ready automatic separation from their ends to or toward the tying thread when the tying thread is drawn, whereby the braiding is entirely or substantially undone and the braiding strands, B, take positions substantially parallel to the body strands, A, and present their ends in the same manner to form a fluffy outer surface above the tying loop, C.

Heretofore tufting has been made by tying parallel strands transversely at chosen distances, the tufting being afterward cut midway between such transverse tying. In some cases this tying has been done with ordinary thread. In other cases, the strands have been sewed together, midway between their ends, by sewing machine stitching. As another means, the strands have been bound

together by means of a metal band surrounding the group of strands midway between their ends. This tying or stitching or binding left the ends of the strands free to spread when the tuft was placed into the mattress loop and said loop drawn.

In my tufting structure there is no transverse tying or sewing or banding; but the structure is composed entirely of strands, a part of the strands being braided around the others to make coherence, the braiding being so loose as to leave the braiding strands substantially free in the finished tuft.

By omitting the transverse tying or stitching or binding, necessity of transversely cutting the tufting structure at precise points is avoided. This makes precise feeding by the machine to the mattress thread loops unnecessary.

Furthermore, the fact that the structure is soft adapts it to feeding through the feeding tube of the tufting machine. Since the structure is soft, compression in the tube is permitted and that aids in making such yielding engagement in the tubing as will facilitate feeding.

The tying thread, C, extends through the mattress cover, D, and the mattress filling, E, in the usual manner, and the drawing of said thread makes a depression in the surface of the mattress around the thread, and the tuft is seated in that depression.

I claim as my invention,

1. A rope-form tufting structure comprising a body of soft fiber strands parallel to each other and other soft fiber strands braided loosely around said body, substantially as described.

2. A rope-form tufting structure comprising a body of soft fiber strands parallel to and twisted on each other and other soft fiber strands braided loosely around said body, substantially as described.

3. The herein-described method of making a rope-form tufting structure, which method consists in forming a body by placing soft fiber strands parallel to each other and braiding other soft fiber strands around said body so loosely that they will free themselves from each other when the structure is cut transversely into sections of tuft length, substantially as described.

4. The herein-described method of making a rope-form tufting structure, which method consists in forming a body by placing soft fiber strands parallel to and twisted on each other and braiding other soft fiber strands around said body so loosely that they will free themselves from each other when the structure is cut transversely into sections of tuft length, substantially as described.

In testimony whereof I have signed my name, this 27th day of June, in the year one thousand nine hundred and twenty-five.

ERNEST KOELLA.