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TUFTED FABRIC AND METHOD OF MAKING THE SAME

Filed Sept. 20, 1928

FIG. 1.

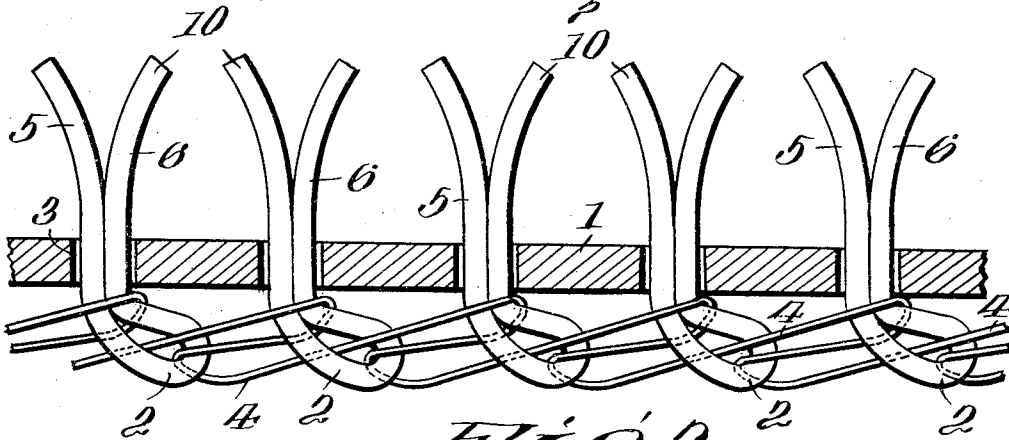


FIG. 2.

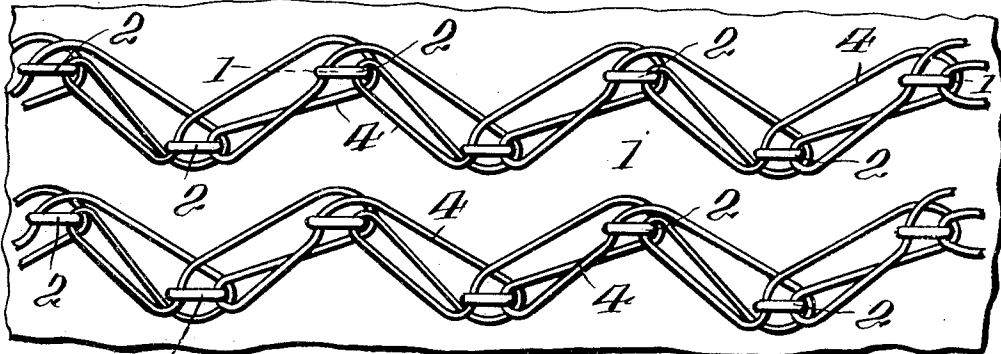
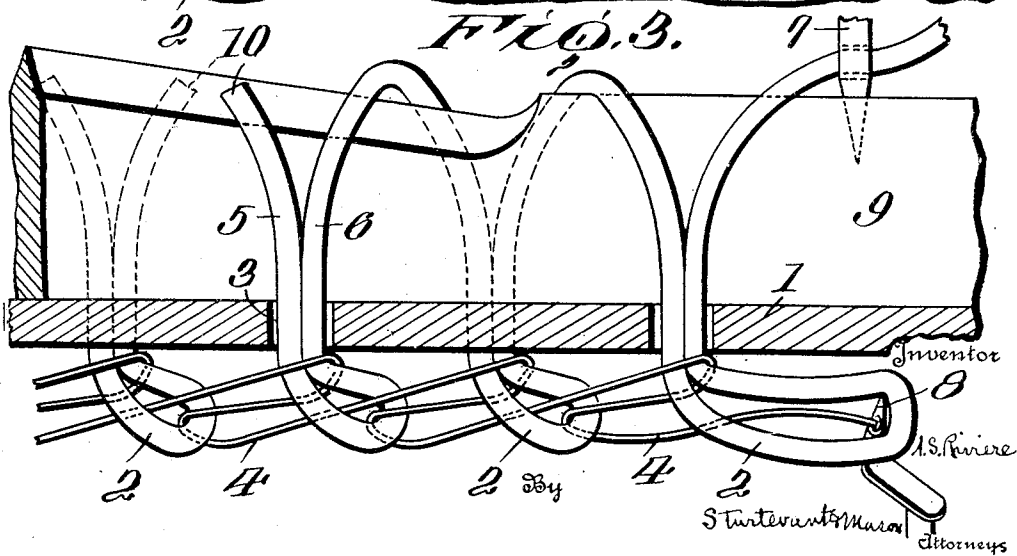


FIG. 3.



UNITED STATES PATENT OFFICE

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TUFTED FABRIC AND METHOD OF MAKING THE SAME

Application filed September 20, 1928. Serial No. 307,160.

The invention relates to new and useful improvements in a tufted fabric, that is, a fabric wherein substantially the entire surface is covered with tufts, and the method of making the same.

An object of the invention is to provide a tufted fabric wherein the tufting thread lengths are looped intermediate their ends, and pass through a fabric base where they are secured on the under face thereof so as to be held to the fabric base.

A further object of the invention is to provide a tufted fabric of the above character wherein the looped portions of the tufting thread lengths are secured by interlooping therewith thread on the under face of the fabric base.

A further object of the invention is to provide a method of producing a tufted fabric of the above character wherein the tufts may be applied to the supporting base by means of an eye-pointed needle threaded with the tufting thread and the individual tufts formed by a severing of the thread between the needle punctures in the fabric base.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings:—

Fig. 1 is a sectional view through a tufted fabric embodying the invention, the view being taken through successive needle punctures.

Fig. 2 is a bottom plan view of the same.

Fig. 3 is an enlarged sectional view through the fabric showing the method of making the same.

The invention is directed to a tufted fabric which includes a fabric base and a plurality of tufts attached thereto so as to substantially cover the upper face of the fabric base. Each tuft consists of a short thread length bent intermediate its ends and extending through an opening in the fabric base. The loop portion extending through the fabric base is secured to the fabric base by a looper thread which is formed into loops and interlocked with the projecting looped ends of the tufting threads. The tufted fabric is preferably formed by the use of an eye-point-

ed needle which is threaded with a tufting thread. The needle passes through the fabric base and a threaded looper interlocks the loop formed by the needle in the tufting thread in the well known manner.

The tufting thread between needle punctures is laid over a former which determines the length of the tuft. The thread is cut midway between the needle punctures and this leaves the free ends of the tufting thread so that there is a short length of tufting thread bent intermediate its ends at each stitch formation passing through the fabric and secured thereto by the looper thread on the under face of the fabric.

Referring more in detail to the drawings, the tufted fabric consists of a fabric supporting base 1. Secured to this fabric base is a series of tufts. Each tuft is formed from a short length of tufting thread bent intermediate its ends to form a loop 2. This loop is passed through an opening 3 in the fabric base and the loop is secured on the under face of the fabric base by a looper thread 4 inter-looped therewith in the usual way. On the upper face of the fabric each tuft includes two tufting strands 5 and 6 and the upper ends of these strands are free. These tufting strands in the finished fabric are comparatively close together and are matted together in a surface covering for the fabric base.

This tufted fabric is preferably formed on a sewing machine by means of an eye-pointed needle 7 and a cooperating threaded looper 8. The needle forms the opening 3 and passes a loop of tufting thread through the opening. The looper 8 passes into the loop formed by the needle in the tufting thread and thus it is that a tufting loop is locked to the fabric base by a looped locking thread. Associated with the needle and looper is a former plate 9, which may be of any desired construction. This former plate is so positioned that the tufting thread between needle punctures is laid over the former plate. Thus it is that the tufting thread is provided with tufted lengths above the fabric base. When they are first laid they are in the form of a loop. This former, however, is provided with a cutting edge which

engages the tufting thread midway between the points where the thread passes through the punctures in the fabric base, and this severs the tufting thread so as to provide 5 free ends indicated at 10, 10 in the drawings.

There is shown in a copending application, Serial Number 291,550, filed July 10, 1928, a machine capable of accomplishing the method which is described. In this machine 10 the needle is vibrated laterally so that it passes first on one side of the former 9 and then on the other side of the former 9. Other ways may be devised for laying the thread length between the needle punctures over a 15 measuring device which measures the tufted lengths and presents the same to a severing device for severing the tufting thread midway between the needle punctures.

In Fig. 2 of the drawings the needle punctures are shown in a zigzag row and this indicates the article which would be produced on the machine in the application referred to, and also the method which would be carried out by said machine. The invention, 25 however, is not limited to the vibrating of the needle laterally, nor the particular construction of the former and severing device set forth in the application. The essential feature consists in the inserting of the loops 30 in a tufting thread through a fabric base and the securing of the loop by some locking means and the severing of the tufting thread midway between the loop formations therein, thus forming the individual tufts.

It will be understood, of course, that other ways may be provided for locking the loops formed in the tufting thread. They may be 35 enchainned, one with another or a shuttle thread passed through the loop. It is essential, however, that the loops shall be secured so that any pull on the tufting thread will not pull the loop from the fabric base.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:— 45

1. A tufted fabric comprising a fabric base, tufting thread lengths looped midway between their ends and extending through the openings in the fabric base at closely 50 spaced intervals in a zig-zag line, the loop in one tufting thread length being secured to the fabric base by the next formed loop in a tufting thread length.

2. A tufted fabric comprising a base, tufting thread lengths looped midway between 55 their ends and extending through openings in the fabric base in closely spaced rows at closely spaced intervals in a zig-zag line, and a locking thread for each row of loops 60 formed into loops extending through one of the loops in the tufting thread and secured by the next adjacent loop in the tufting thread.

3. The method of making tufted fabrics 65 consisting in forming a tufting thread into

loops in succession, inserting the loops as formed through a fabric base at closely spaced points in a zig-zag line, securing a formed loop in a tufting thread by a succeeding loop formed in a tufting thread, and 70 subsequently severing the thread between the formed and locked loops to form tufts.

In testimony whereof, I affix my signature.

ALBERT S. RIVIERE.

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