

(No Model.)

H. H. FEFEL.
OVERSTITCH BINDING FOR EDGES OF FABRICS.

No. 476,454.

Patented June 7, 1892.

FIG. 1.

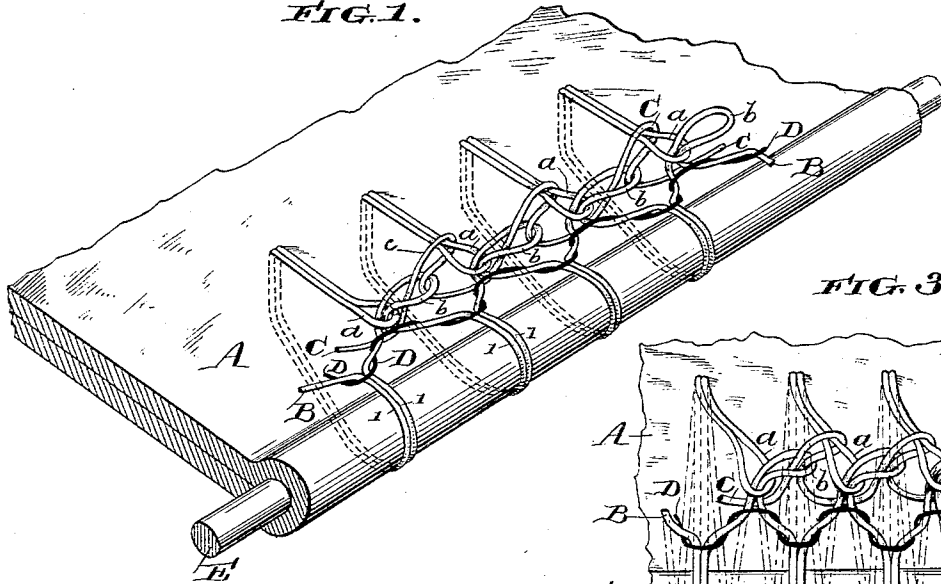


FIG. 3.

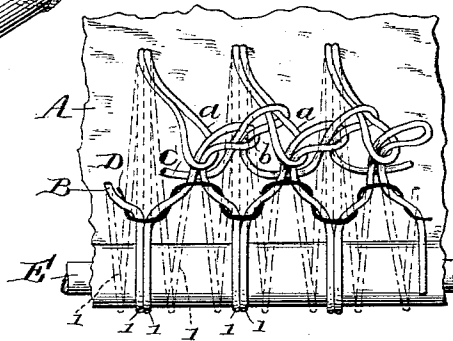


FIG. 2.

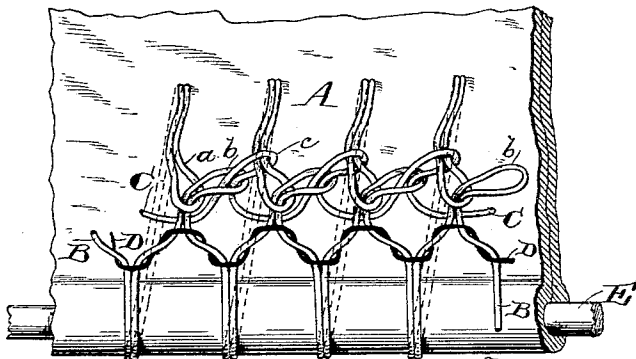
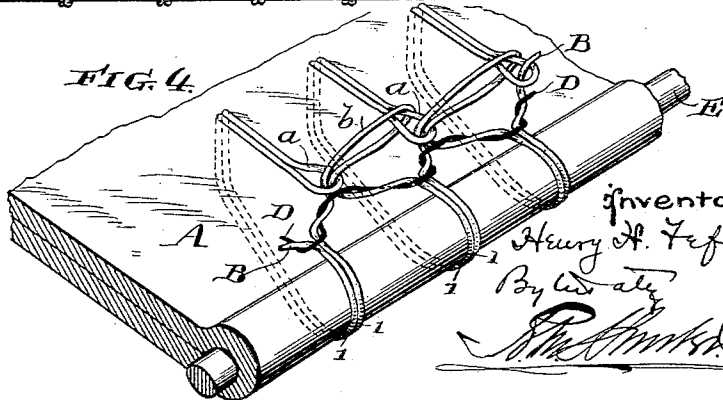


FIG. 4.



Witnesses:

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By *W. ...*

[Signature]

UNITED STATES PATENT OFFICE.

HENRY H. FEFEL, OF NEW YORK, N. Y., ASSIGNOR TO THE UNION SPECIAL SEWING MACHINE COMPANY, OF ILLINOIS.

OVERSTITCH BINDING FOR EDGES OF FABRICS.

SPECIFICATION forming part of Letters Patent No. 476,454, dated June 7, 1892.

Application filed June 20, 1891. Serial No. 396,893. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. FEFEL, of the city and county of New York, and State of New York, have invented an Improvement in Bindings, of which the following is a specification.

My invention relates to bindings; and it consists of certain improvements which are fully set forth in the following specification, and are illustrated in the accompanying drawings, which form a part thereof.

In the better class of hats the hat sweats or bands have usually been bound by a line of over-and-over hand-stitches forming what is known as a "whip-stitch." This hand method is, however, slow and expensive, so that in the cheaper grade of hats it is not practicable. The same effect has not heretofore been attained by machine-sewing, which, while it has been employed, does not present the appearance of a whip-stitch, so that machine-sewed hat-bands are readily distinguishable from those bound by hand-sewing.

The object of my invention is to form a binding or arrangement of stitches upon the edge of a hat-band or other object, so that it may be made by machinery and will yet have the appearance of a hand-sewed whip-stitch. My invention is not concerned with the particular machinery or mechanism by which it is produced, but relates only to the binding itself.

While my invention is particularly suited to bindings upon hat-bands, it is not of necessity limited thereto, but may be used upon any article upon which it is desired to produce the result.

In carrying out my invention I convert an ordinary zigzag or herring-bone machine-stitch into the appearance of a whip-stitch by means of an auxiliary tying-thread, which passes about the adjacent threads of the zigzag stitch, which pass over the edge of the fabric, and draws them together.

In the drawings, Figure 1 is a perspective view of a portion of a hat-band or other article having my improved binding applied thereto. Fig. 2 is a perspective view of the same at a very slight perspective angle. Fig. 3 is an illustrative view showing the manner in which the threads of the zigzag stitch are

converted into the whip-stitch; and Fig. 4 is a perspective view similar to Fig. 1, illustrating a modification of the invention.

A is the fabric or material upon which the binding is to be formed.

B is the main thread of which the zigzag stitches are formed. This thread passes over the edge of the fabric, then through the material and forming a loop *a* upon one side thereof, then passes back through the material and again over the fabric and passing through the loop *a* forms a second loop *b*, and thence passes back over the edge and through the material again to form a second loop *a*, and so on.

C is a locking-thread, which passes through the loop *b*, forms a loop *c* over the next loop *a*, and then passes back through the loop *b*, and thence to the next loop *a*, thus locking the loops *a* and *b* together. This is a well-known stitch, and without an auxiliary tying-thread the stitches would pass in a zigzag manner over the edge of the fabric in the well-known way. To prevent this, however, and to form the whip-stitch I employ the tying-thread D, which passes over the adjacent threads *l l*, which would naturally diverge to form the zigzag effect, thence under one of those threads and over the end of the loop *b*, and then under the next pair of adjacent threads *l l*, drawing them together and producing the whip-stitch.

In the diagram Fig. 3 the ordinary position of the threads without the tying-thread D is shown in the dotted lines and the resulting or whip-stitch effect is shown in the full lines. The essential feature of the invention lies in the employment of the tying-thread D, which passes about the successive adjacent threads of the zigzag stitch and draws them together to produce the whip-stitch effect. The particular manner of forming the zigzag stitch is therefore not material to my invention, and in Fig. 4 I have shown a construction in which the stitch is made without the employment of the locking-thread C. In this stitch the thread B, after passing over the edge of the fabric, passes through it and back, forming the loop *a*, and then forms a second loop *b* through the loop *a*, and the next loop *a* is formed through this loop *b*, and so on successively, as is shown in the drawings. This

also is a well-known stitch and normally produces a zigzag effect, which is changed to the whip-stitch by the tying-thread D passing around the adjacent threads *ll* and drawing them together as in the other construction.

E is a reed inserted between the two faces of the fabric to form the rounded edge. This reed, however, forms no part of my invention, which, as before stated, is not limited to hatbands, but may be used upon any material upon which the effect is to be produced. A hatband with this binding may be sewed into the hat by any machine or other stitch with the looping of the threads and the tying-thread D connected upon the inner side. The effect thus produced by the visible stitch is a plain whip-stitch, such as is produced by the hand-sewing.

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

1. A binding consisting of a piece of fabric, a line of stitches consisting of threads passed through the fabric, forming a series of loops on the under side thereof, and also passed over the edge of the fabric, forming a second series of loops on the underside engaged with the first series of loops, each pair of threads which passes over the edge of the fabric being contiguous upon the face side of the fab-

ric, and an independent thread passed about each pair of contiguous threads to hold them together.

2. A binding consisting of a piece of fabric, a series of zigzag stitches over the edge of the fabric, with loops upon the under side, a locking-thread upon the under side of the fabric, engaged with the loops of the zigzag stitches, and an independent thread about each pair of threads of the zigzag stitch, which diverge at the edge of the fabric, drawing said divergent threads together to form the appearance of a whip-stitch.

3. A binding consisting of a piece of fabric, a series of zigzag stitches consisting of threads passed over the edge of the fabric and through the fabric and looped together on the under side thereof, with the adjacent threads of successive stitches drawn together to produce a whip-stitch effect, and an independent tying-thread on the under side of the fabric, passed about said adjacent threads of successive stitches to hold them together.

In testimony of which invention I have hereunto set my hand.

HENRY H. FEFEL.

Witnesses:

JOHN J. SLATER,
J. H. HOWELL.