

(No Model.)

G. DOOLITTLE.

FURNITURE TUFT AND METHOD OF MAKING THE SAME.

No. 254,936.

Patented Mar. 14, 1882.

Fig. 1.

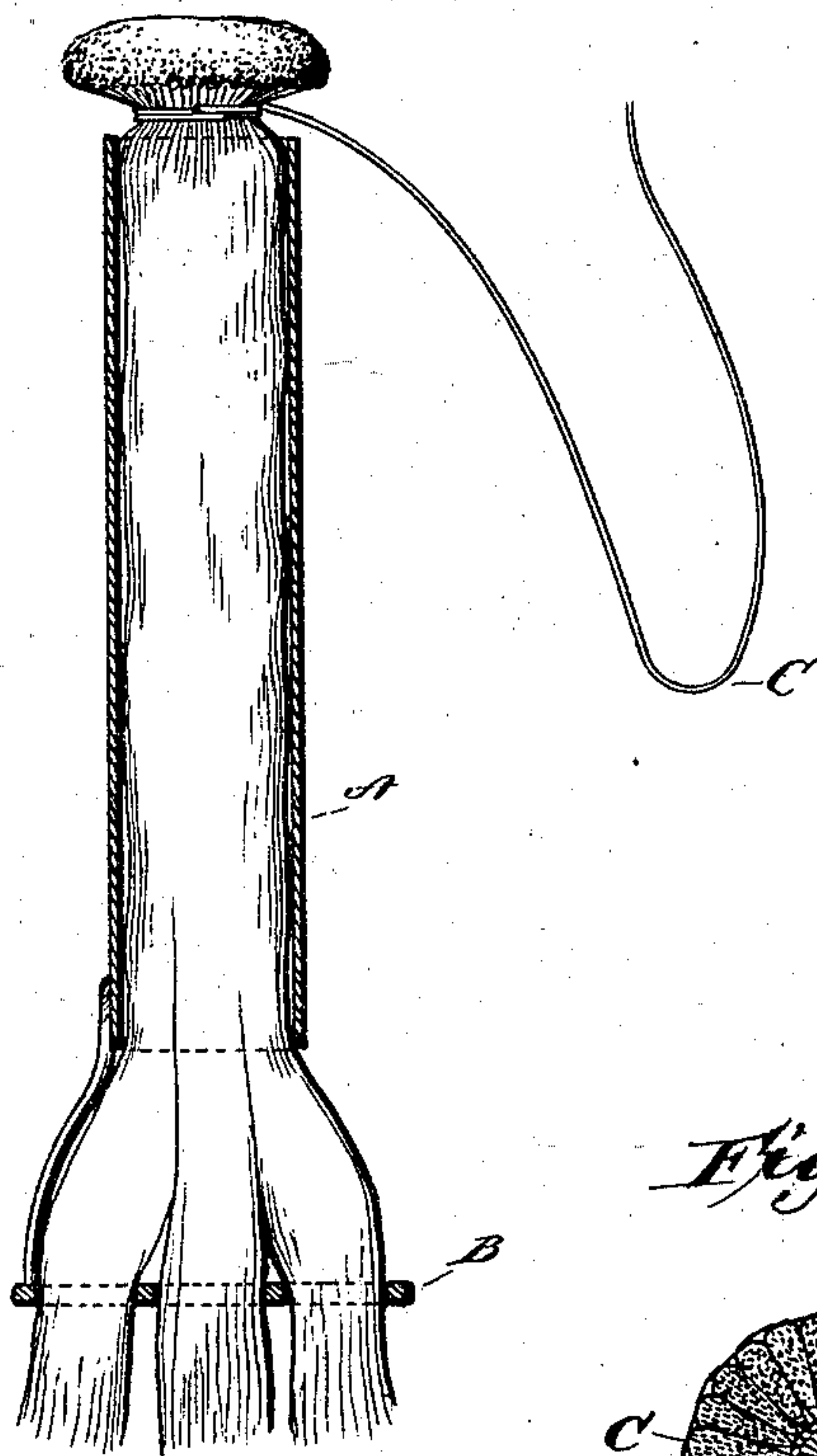


Fig. 2.



Fig. 5.

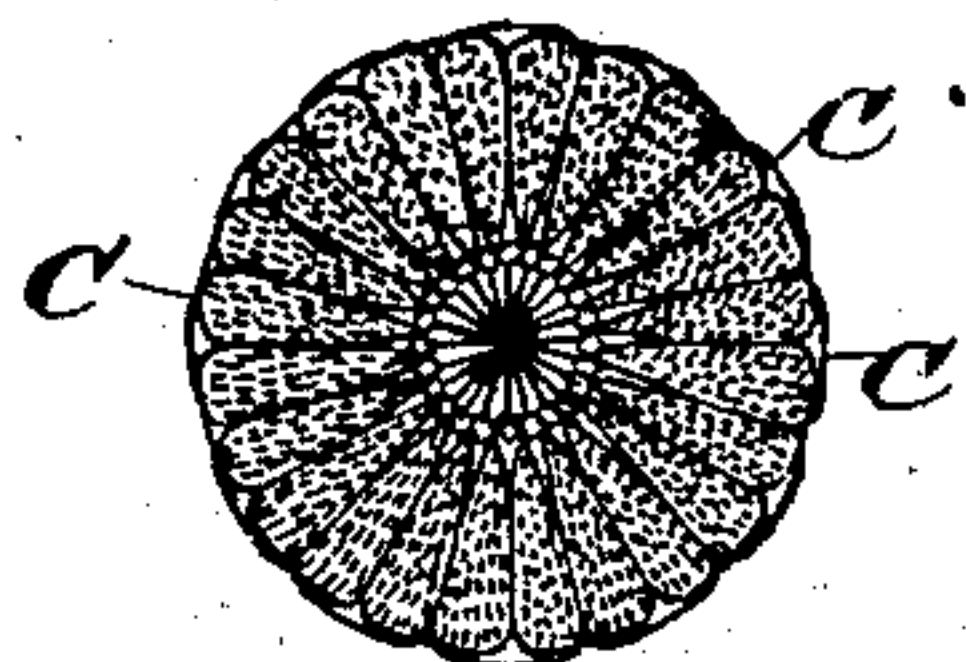


Fig. 3.

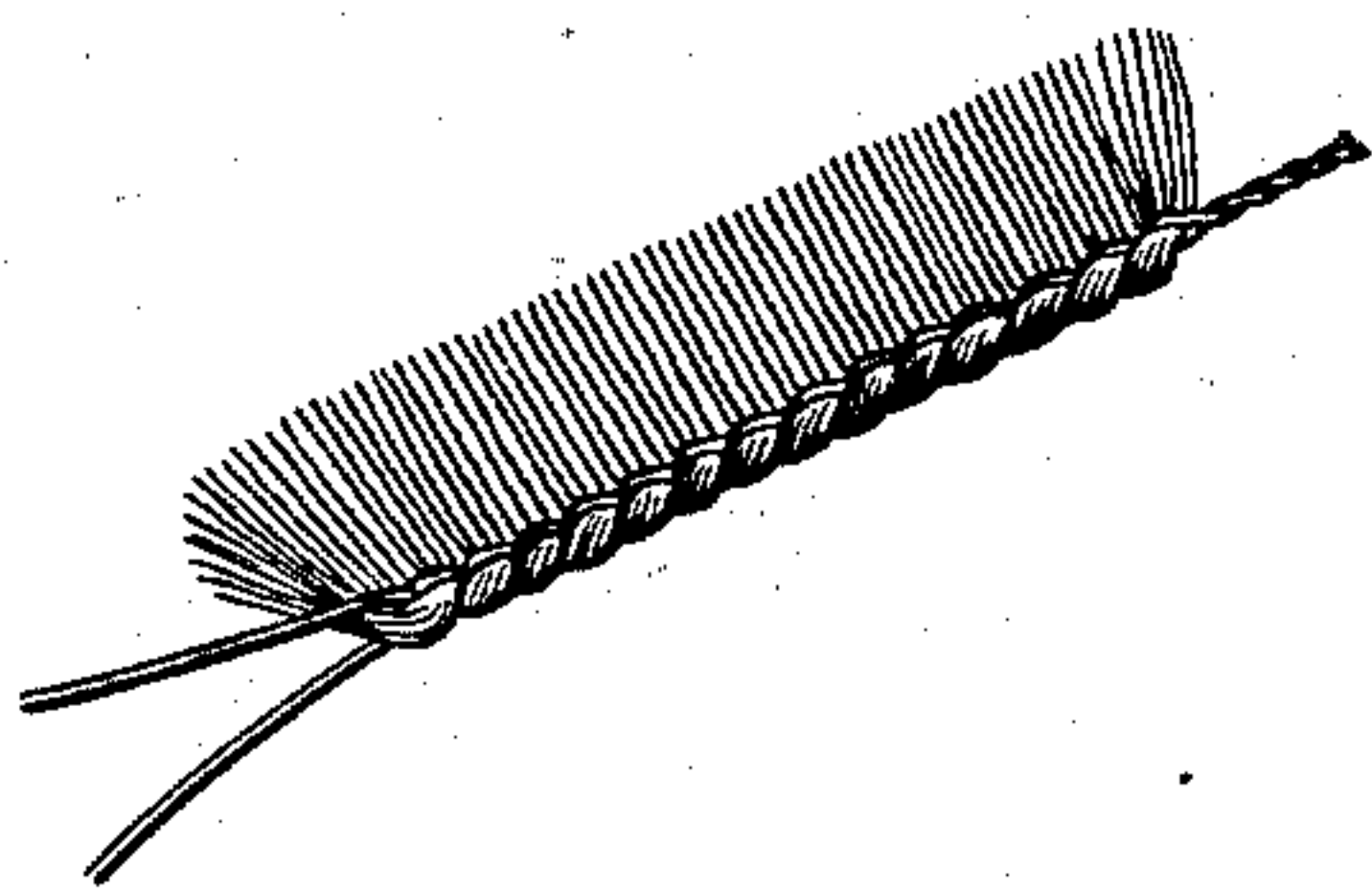


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE DOOLITTLE, OF BRIDGEPORT, CONNECTICUT.

FURNITURE-TUFT AND METHOD OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 254,936, dated March 14, 1882.

Application filed February 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DOOLITTLE, a citizen of the United States, residing at Bridgeport, Connecticut, have invented new and useful Improvements in Furniture-Tufts and the Method of Making the Same, of which the following is a specification.

My invention relates to certain improvements in the method of producing tufts for upholstery, and to certain novel features of construction of the product.

The objects of my invention are the simplification of the process or method of production and strength and durability of structure in the product.

With these ends in view my invention consists in the method of forming yarn-tufts by first feeding the material through a condensing-tube, and slightly beyond the end thereof, and then, while turning the tube upon its longitudinal axis, stitching through from side to side with a needle and suitable thread upon a machine adapted for the purpose, and subsequently severing the tuft behind the plane of stitching; and my invention further consists of a tuft for upholstery, composed of strands of yarn or other suitable material, having a backing formed by stitching in the manner described to give it strength and rigidity as a new article of manufacture, as will hereinafter be more fully set forth.

In the accompanying drawings, Figure 1 is a longitudinal section of a suitable apparatus for carrying out my improved method, and showing in plan view the yarn-strands concentrated and stitched. Fig. 2 is a side elevation of one of my improved tufts; and Figs. 3 and 4 are perspective views, illustrating the most common way of producing tufts; and Fig. 5 is a cross-section of my improved tuft, taken in a plane at right angles to the lay of the strands composing the tuft.

Prior to my invention tufts have been formed from yarn by weaving it and wire together, as shown at Fig. 3, and then rolling or coiling the same and over stitching it, as seen at Fig. 4. This is comparatively a tedious and expensive process, and the tuft, when completed, is necessarily loose and frail. It has also been proposed to form tufts by concentrating the strands of yarn and projecting them beyond

the end of the concentrating-tube and binding the same by a circumferential binding-cord, and subsequently cutting the tuft off behind the binding-cord. As the tendency of the strands is to separate and expand immediately after escaping beyond the end of the concentrating-tube, it is apparent that great power must be exerted by the binding-cord (which must necessarily be very strong) to confine the ends of the strands composing the tufts, and as the binder is applied circumferentially and nearer one end of the strands than the other, it (the binding-cord) operates as a fulcrum, under the expansive leverage of the confined strands, to throw the central strands upward and out of confinement, and the displacement or removal of any of the strands correspondingly weakens the relations of the remainder and renders the structure very uncertain in its function as a tuft.

By my improved method of forming tufts I overcome all the disadvantages described, and obtain a very strong and durable article.

It will be observed that by turning and stitching upon a sewing-machine adapted for the purpose the thread is looped or twisted (according to the character of the machine employed) after passing through the tuft, and the loop or lock of the stitch is by the tension drawn up and toward the center of the tuft; and by this means I obtain short external or circumferential stitches terminating in radial and intersecting drawing-stitches, so that the strands composing the tuft are thoroughly and intimately bound together by first bunching the strands in segments commensurate in size to and governed by the feed of the machine, and then associating and binding together such segments, thus forming a circular tuft. It will also be observed that the continued rotation or feed of the condensed strands, while the needle is forced through the same, thoroughly unites individual strands and segments together, as clearly shown at Fig. 5 of the drawings.

The ordinary compressing-tube (shown at A) is used, and the flared end may be provided with a reed, B, which may be used to group and direct different colors of yarn to produce a pleasing effect in the tuft. C is the thread.

It will be apparent that the concentrating-

tube may be applied with a little ingenuity to a sewing-machine, and proper yarn-feeding and tube-rotating mechanism employed, so that the stitching may be done by machinery.

5 I have not shown any sort of sewing-machine, as I do not wish to confine myself in this particular, as any machine suitably adapted for the purpose may be used.

I do not wish to be understood as claiming
10 or confining myself to the special instrumentalities shown for carrying out my invention, the gist of which rests in the idea of sewing and binding the strands of yarn together, as already shown and fully described.

15 What I claim, therefore, and desire to secure by Letters Patent, is—

1. The method of making tufts of yarn or other suitable material by condensing the

strands and confining and associating the same together by circumferential and radial intersecting stitches, substantially in the manner hereinbefore set forth. 20

2. As an improved article of manufacture, a tuft for upholstery, composed of strands of yarn or other suitable material bound and
25 stitched by circumferential and intersecting radial stitches, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses. 30

GEORGE DOOLITTLE.

Witnesses:

H. GARDNER,
ALFRED B. BEERS.