

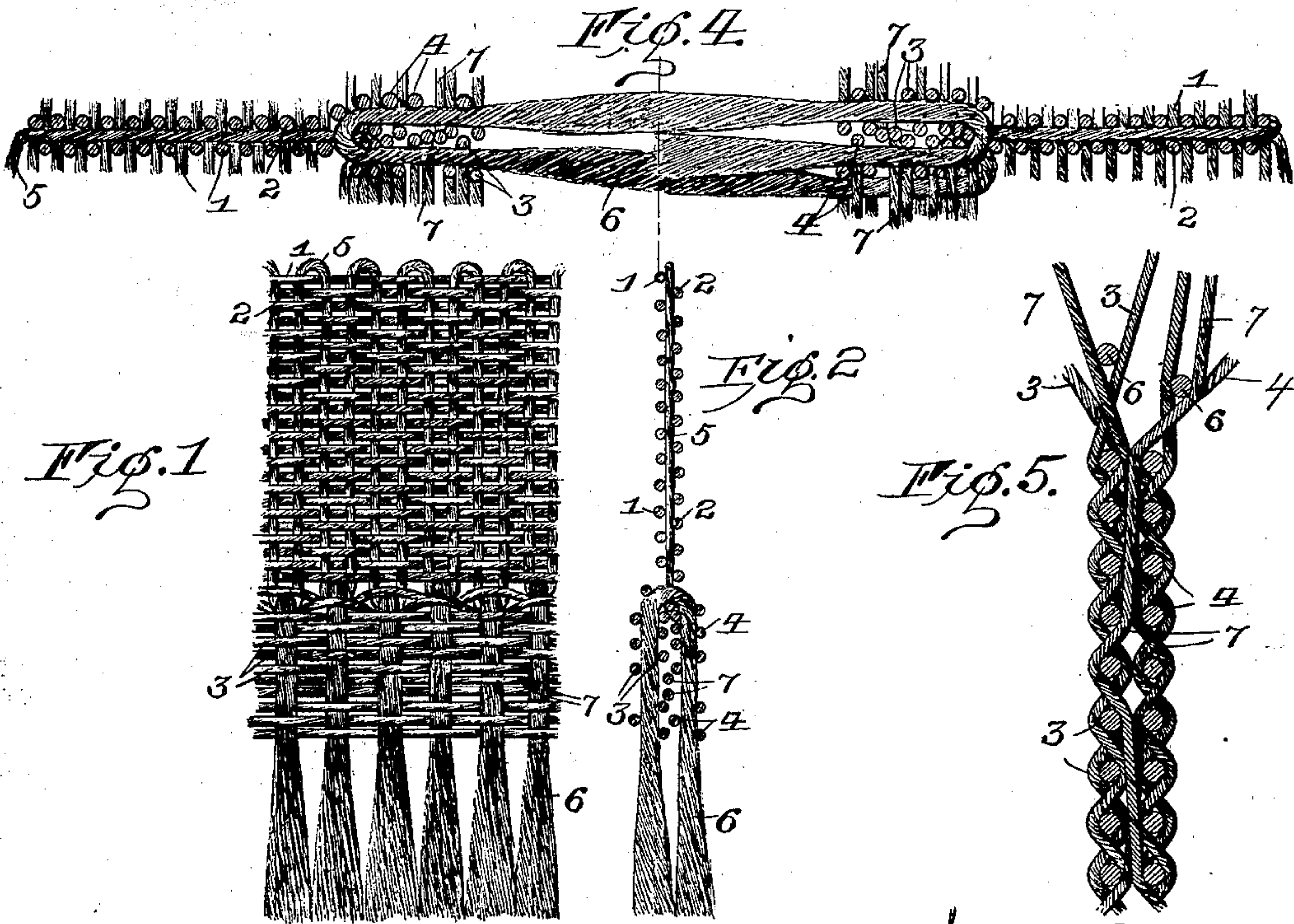
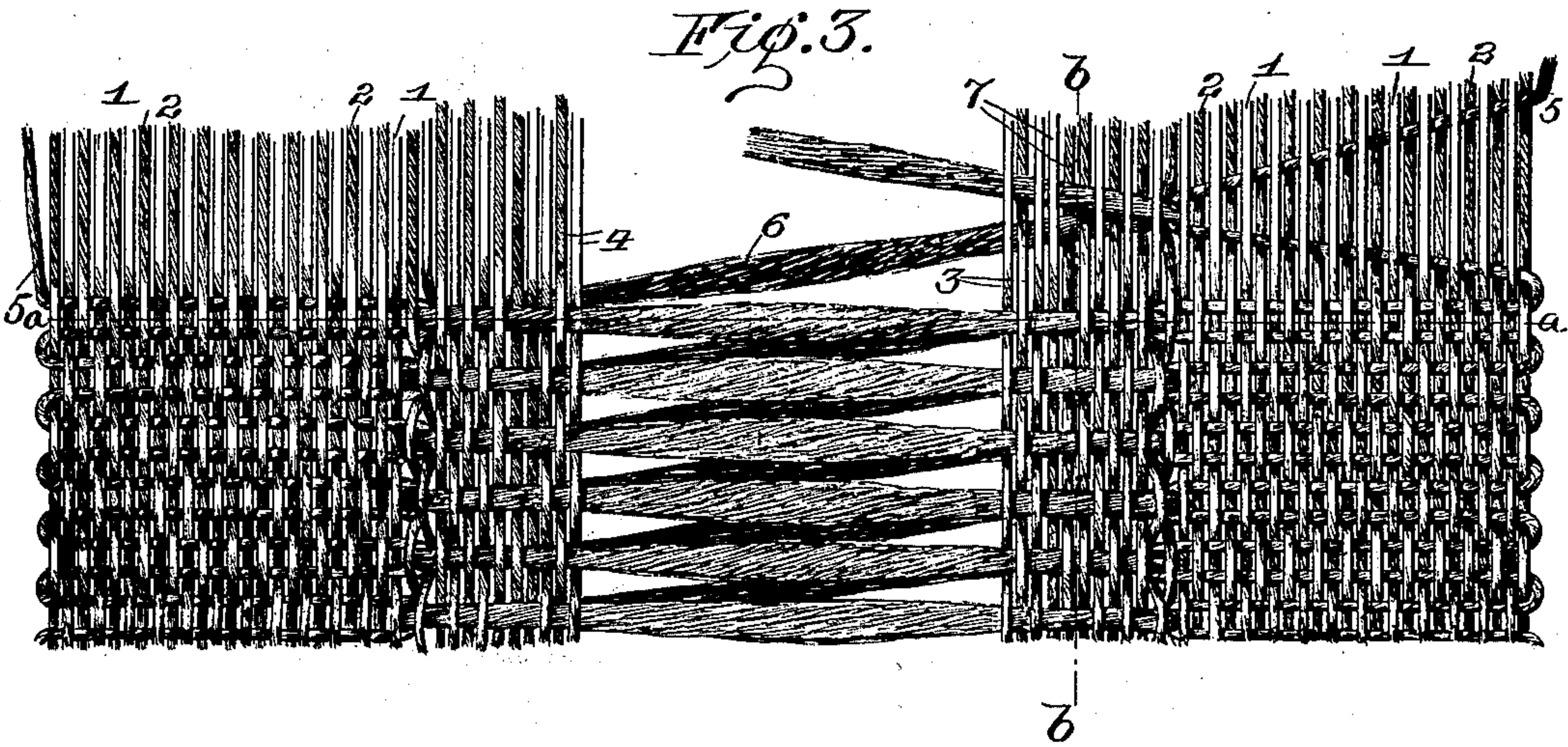
No. 673,293.

Patented Apr. 30, 1901.

C. P. SCHLEGEL.
WOVEN FABRIC.

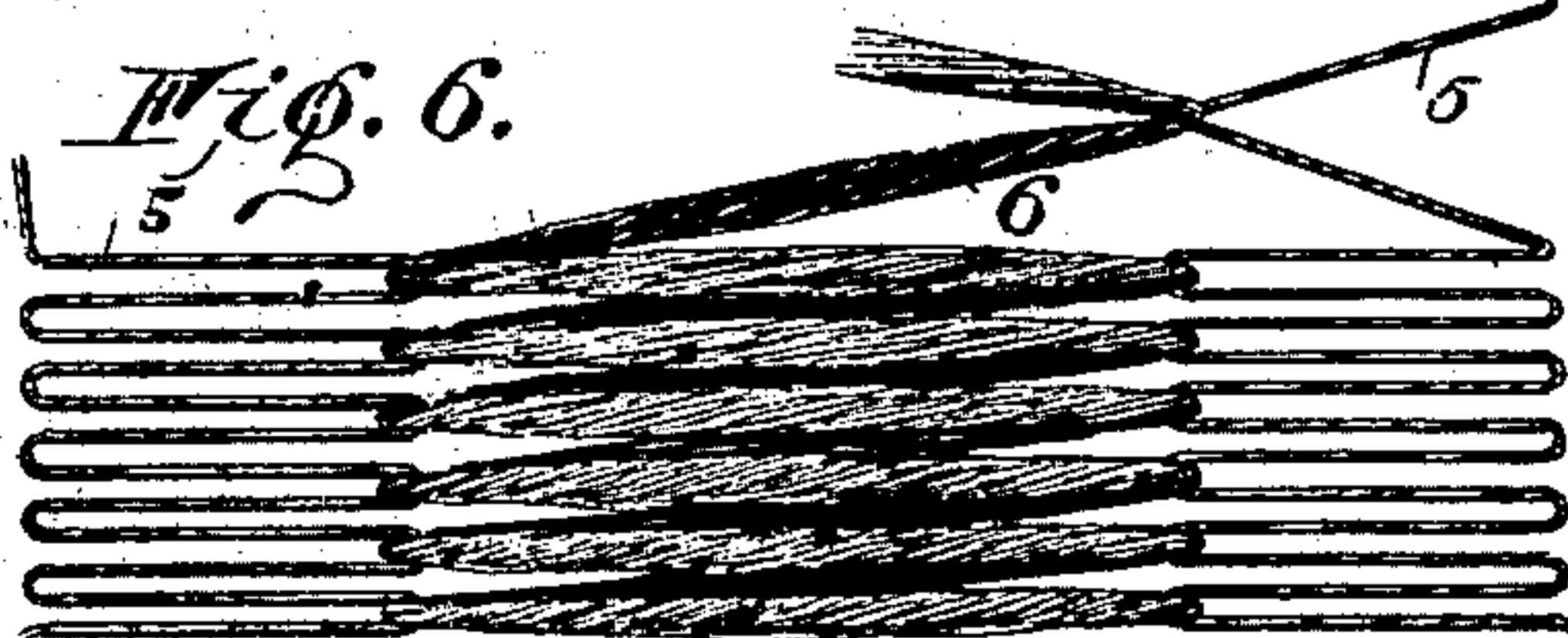
(Application filed Jan. 5, 1901.)

(No Model.)



Witnesses.

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WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 673,293, dated April 30, 1901.

Application filed January 5, 1901. Serial No. 42,214. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES P. SCHLEGEL, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Woven Fabrics; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention has for its object to provide an improved fabric or fringe particularly adapted for use as a skirt-protector, and consisting of a heading or body portion and a fringe or edge composed of the loose ends of fibers or threads which, if relatively stiff, serve the purpose of forming a brush edge such as is now used upon skirt-protectors; and the invention consists in providing a fabric or fringe of this nature which will have the requisite fullness at the brush edge and at the same time may be manufactured cheaply and in large quantities on an ordinary single-shuttle weaving-loom. The fabric embodies generally a heading composed of a plurality of warp-threads and the continuous weft-thread and the body or brush portion composed of tufts or bunches of yarn or fiber having bights or folded portions looped through the bights of the weft, and the separate strands or portions of the tuft-wefts below the body-weft bights are separately interwoven with separate warp-threads to bind them together and form a doubled brush edge, and also, if desired, these tuft-strands may be bound at intervals only to prevent too great spread of the brush by carrying through to opposite faces of the fabric one or more of the brush-warps, all as will be hereinafter described, and the novel features pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a side elevation of a fabric adapted for use as a skirt binding or protector, the strands or threads of which it is composed being separated somewhat to more clearly show the construction. Fig. 2 is a vertical sectional view of the same; Fig. 3, a plan view of the strands, showing the method of weaving; Fig. 4, a cross-sectional view on the line *a a* of Fig. 3;

Fig. 5, a longitudinal sectional view taken on the line *b b* of Fig. 3; Fig. 6, a view showing the weft-threads or filler comprising the heading and the connecting-filling with the warp-threads removed.

Similar reference-numerals in the several figures indicate similar parts.

The fabric adapted to be used as a skirt-protector, as shown particularly in Figs. 1 and 2, is composed of a plurality of warp threads or strands 1, 2, 3, and 4, the threads 1 and 2 being interwoven with a continuous weft 5, and attached to this heading is a brush edge embodying untwisted or loosely-twisted strands 6, bent into a loop or bight at their upper portions, which pass through the loops or bights of the weft 5 and on one side or face of the fabric are bound by the set of warps 3 and on the other by the separate warps 4, whereby there is provided a closely-woven heading or body portion for attachment to a garment and the brush edge, which is separated at the point of its connection with the body or head, so as to give additional fullness.

Aside from the efficiency of this trimming, and which, if desired, may be made by hand, it may be readily and cheaply manufactured in an ordinary weaving-loom, in which two sheds, each embodying two sets of the warps 1 and 2, are arranged on each side and placed in the heddles of an ordinary Jacquard loom, the warps 3 and 4 being also arranged substantially parallel with the warps 1 and 2 and in heddles. The heading wefts or fillers 5 are fed from suitable bobbins or spools located at the sides of the lay and passing through suitable heddles controlled by the jacquard. The filling or weft strands 6 composing the brush of the trimming fabric and the connecting part of the fabric completed on the loom are contained in the ordinary shuttle and are passed through the shed from side to side in the ordinary manner, being looped around the body-weft 5 at the sides of the lay at each pick upon the operation of the heddles carrying the said wefts 5 in a manner well known to weavers. The shed embodying warps 4 is arranged to be opened at each outward movement of the shuttle relative to the sides of the double fabric being formed. Then this shed closes, winding the filling-strand 6 up to

the outermost of the warp-threads 4, which act as stop-warps for said filling. Before the shuttle moves inward again the heddle carrying the body-weft 5 is carried beyond the shuttle, either up or down, (the sheds formed by the warps 1 and 2 then being open,) so that the inward movement of the shuttle brings in the body-weft 5, upon which there is a very slight take-up tension, and placing the bight of said weft 5 in with the stop-warp 4, as shown in Figs. 3 and 4, so that the bight of the heading-weft 5 is in the bight of the brush-filler 6. Then the shed formed by the warps 3 is closed, the innermost of the warps 3 forming a stop-warp for the filling 6 and binding one side of the weft 6. The warps 3 and 4, around which the filling or weft 6 extends, operate as stop-warps in that they serve to limit the excessive movement toward the center of the shed of the bights of said filling.

It will be noted that, as shown in Figs. 3 and 4, the warps 4 are located below the plane of the heading on the right-hand side and above on the left-hand side, so that two reversed fabrics are formed, connected at the center by the loose or untwisted fibers of the brush-filling 6, these loose fibers being severed midway between the headings to form the brush-edge fabric or skirt-protector, (shown in Figs. 1 and 2,) whereby not only is an economy in weaving effected, but the article produced embodies a relatively thick brush combined with a narrow strong heading, the weft of which is continuous. While my invention is particularly for forming these brush-headings, it will be understood that the fabric, as shown in Fig. 4, could be left intact without severing it into separate strips and that instead of making the center filling 6 of relatively stiff threads it might be made of silk or sufficiently long to form an ornamental fringe for any purpose, as will be understood by those skilled in the art.

The brush edge embodies the doubled tufts which are looped through the continuous filler or weft of the heading, and the separate strands of the brush edge are bound separately by the warps 3 and 4 to make the brush full; but in order to prevent too great a separation or flaring of the brush edge the fabrics formed of the brush-strands and the said warps may be secured at intervals—as, for instance, by a separate binding or tying warp 7, which is controlled by a heddle operated

from the jacquard, say, at every fourth or sixth pick or passage of the shuttle.

In Fig. 5 the section is primarily for the purpose of showing the location of the warp or thread 7, which prevents the excessive separation of the two sides of the doubled filling 6, and one set of the warps 4 is located beneath the warp 7 and move on the pick shown with them; but the end of warp 4 is, for illustration purposes only, extended outward.

I claim as my invention—

1. A fabric embodying a heading comprising warps and a continuous weft and a brush edge or fringe composed of doubled tufts having the bights interlocked with and extending through the bights of the heading-weft, and separate sets of warps binding the tuft-strands together on each side of the bights and below the latter.

2. A fabric embodying a heading comprising warps and a continuous weft and a brush edge or fringe composed of doubled tufts having the bights interlocked with and extending through the bights of the heading-weft and separate sets of warps binding the tuft-strands together on each side of the bights and below the latter and means for securing the separately-bound tuft-strands at intervals.

3. A fabric embodying a heading comprising warps and a continuous weft and a brush edge or fringe composed of doubled tufts having the bights interlocked with and extending through the bights of the heading-weft separate sets of warps binding the tuft-strands together on each side of the bights and below the latter and a binding or tying warp engaging the separately-bound tuft-strands together at intervals below the bights to secure them.

4. A fabric comprising separated headings on each side each embodying warps and a continuous weft said wefts being connected by a continuous filling the bights of which extend through the bights of the headings and two sets of separate superposed warps at the edge of each heading each set binding the filling-strands together on one side of the bights thereof.

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