

(No Model.)

2 Sheets—Sheet 1.

L. BINNS.
WOVEN CHENILLE FABRIC.

No. 543,285.

Patented July 23, 1895.

Fig. 1.

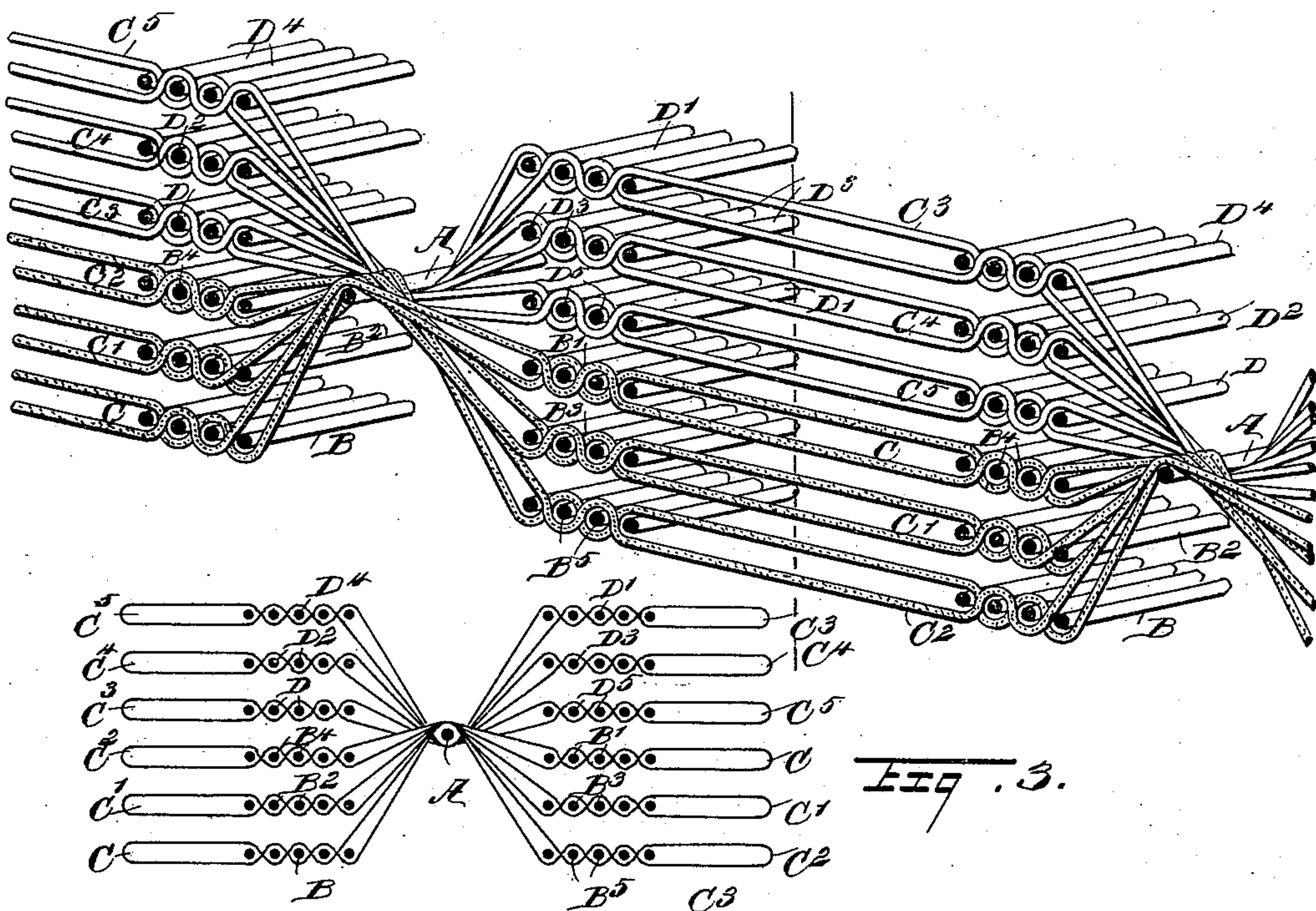


Fig. 3.

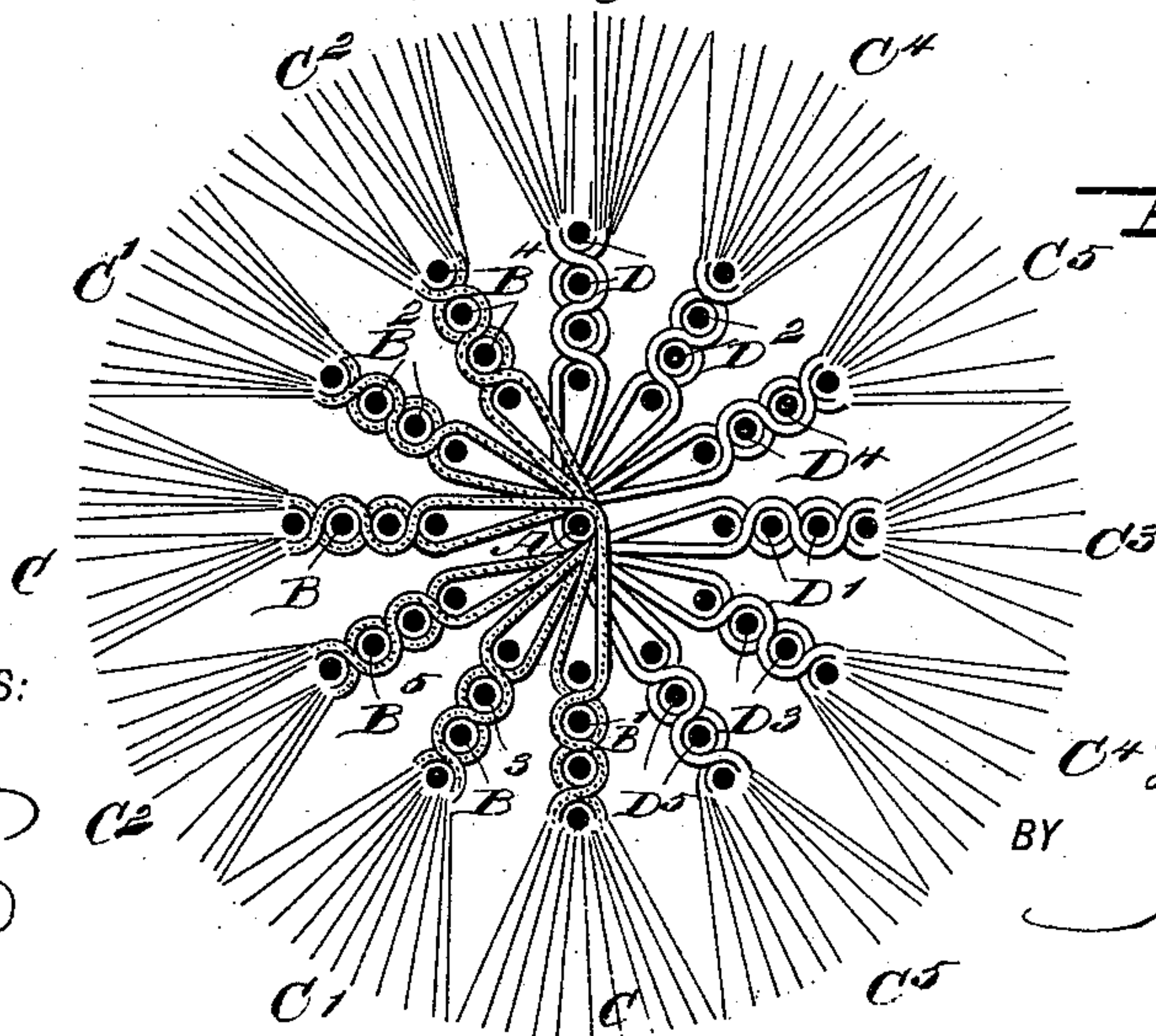


Fig. 2.

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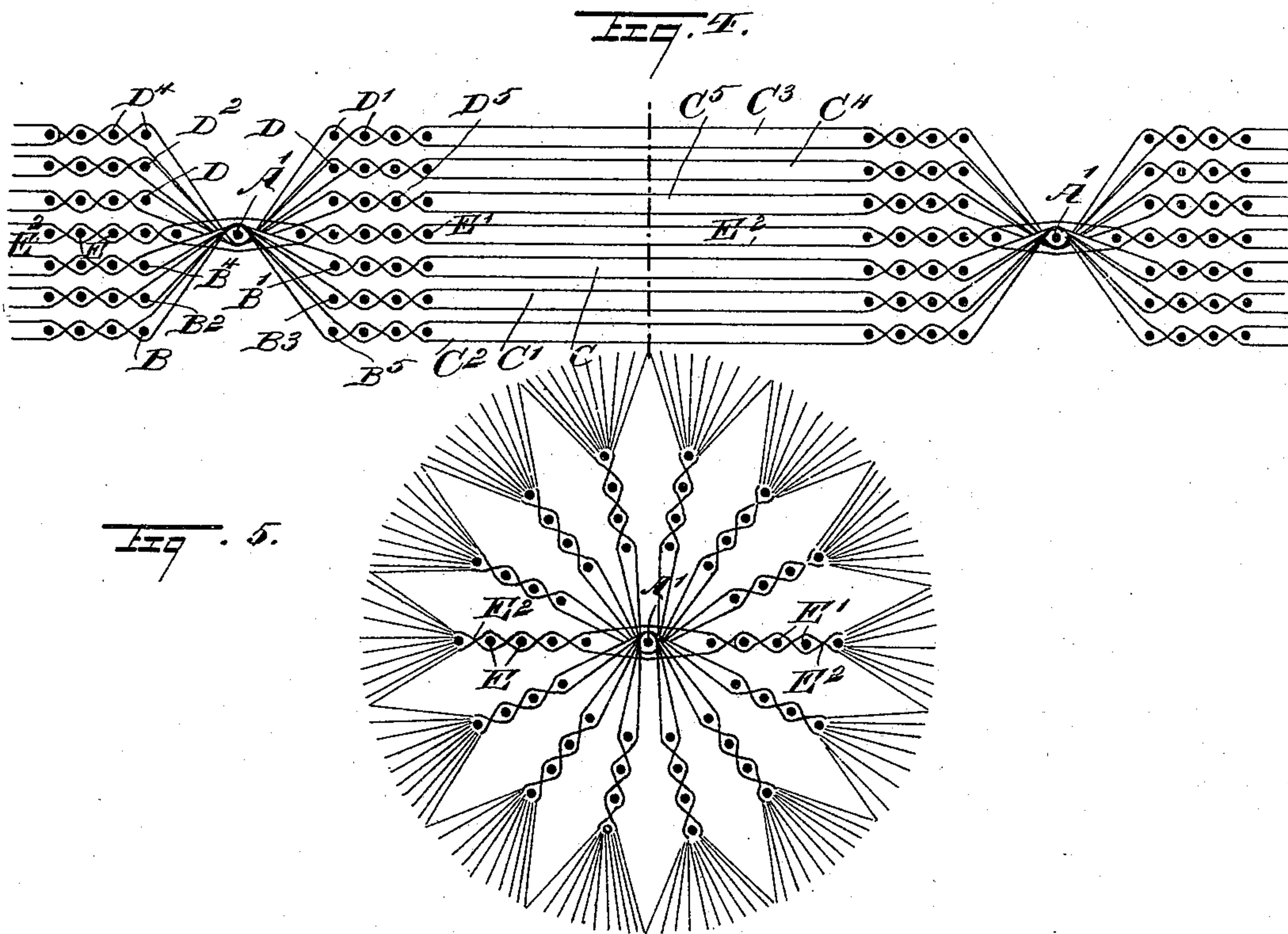
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UNITED STATES PATENT OFFICE.

LEEDHAM BINNS, OF PHILADELPHIA, PENNSYLVANIA.

WOVEN CHENILLE FABRIC.

SPECIFICATION forming part of Letters Patent No. 543,285, dated July 23, 1895.

Application filed March 7, 1894. Serial No. 502,650. (No specimens.)

To all whom it may concern:

Be it known that I, LEEDHAM BINNS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Woven Chenille Fabric, of which the following is a full, clear, and exact description.

The invention relates to woven chenille fabrics such as shown and described in Letters Patent of the United States No. 514,809, granted to me on February 13, 1894.

The invention consists in a chenille fabric comprising a central warp, separate sets of warps on opposite sides of the said central warp, and wefts binding the central warp and the separate sets of warps, some of the wefts passing over the said central warp and the remainder under the same, the wefts forming bends where they bind the central warp and the ends of the wefts projecting from the outermost warp-threads in the several sets, forming tufts or loops.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective cross-sectional view of the fabric, illustrating diagrammatically the method of the weaving. Fig. 2 is a cross-section of the finished fabric after the web shown by Fig. 1 is cut into strips. Fig. 3 is a cross-sectional view similar to Fig. 1, but illustrating diagrammatically the mode of weaving a single uncut strand. Fig. 4 is a cross-sectional view of the improvement as arranged with a central warp bound in place by a separate set of wefts; and Fig. 5 is a like view of the same as cut, showing the finished article.

The improved woven chenille fabric, as illustrated in Figs. 1, 2, and 3, is provided with a central warp A and sets of warps arranged on opposite sides of the said central warp and in different horizontal planes, as will be readily understood by reference to the drawings. On one side of the central warp A and a suitable distance below the same is arranged a set of warps B, comprising three or more

threads and bound by the weft-threads C, which extend upwardly from the innermost thread of the set of warps B to pass over the said central warp A and then to the other side thereof to bind in a second set of warps B', arranged in a different horizontal plane to that in which the set of warps B are located. The two sets of warps B and B' are thus bound by the same weft-threads C, but a suitable distance apart on opposite sides of the warp A and in different horizontal planes.

Directly above the set of warps B is arranged another set of warps B², preferably containing the same number of threads as the set of warps B, and these warps B² are bound by weft-threads C', which likewise extend upwardly and pass over the central warp A, to then pass downward on the other side of the said central warp to bind in a set of warps B³ located directly below the set of warps B' and in the same horizontal plane as the warps B². Above the latter is arranged a set of warps B⁴, bound in by weft-threads C² also passing over the central warp A, to then pass downward on the opposite side thereof to bind in a set of warps B⁵ located below the warps B³ and in the same horizontal plane in which the warps B are located.

Above the set of warps B⁴ is arranged a set of warps D, bound in by weft-threads C³ passing under the central warp A to the other side thereof, and then extending upwardly to bind in the uppermost set of warps D' on the said side, and above the set of warps D is arranged another set of warps D², bound in by weft-threads C⁴, also passing under the central warp A, to rise on the other side to bind in a set of warps D³ located below the warps D', as plainly shown in Fig. 1, but in the same plane as the warps D².

Above the warps D² is arranged another set of warps D⁴, bound in by weft-threads C⁵, extending downwardly and passing under the central warp A, to rise on the other side thereof to bind in a set of warps D⁵, arranged under the set of warps D³ and directly above the set of warps B'. The weft-threads C, C', C², C³, C⁴, and C⁵, after leaving the warps B³ B⁵ D' D³ D⁵, respectively, bind in second sets of warps B B² B⁴ D D² D⁴, respectively, in the manner above described, to then pass over and under a second central warp, as be-

fore described, and shown in Fig. 1. The entire fabric throughout its width is composed of such sections, each comprising sets of warps bound by the wefts, as has been described, it being understood that some of the wefts pass over a central warp and some pass under the same from a set on one side of the central warp to a set of warps on the other side of the said central warp.

Now, when the fabric has been woven in the manner described and the wefts are cut (as indicated by dotted lines in Fig. 1) between adjacent sections, each composed of a central warp, set of warps, and wefts, as above described, then the cut ends of the wefts form tufts, as plainly shown in Fig. 2, the said tufts forming a complete circular fabric, as the cut ends of the wefts spring back to the position shown in Fig. 2—that is, in line with the row of warp-threads of the set they bind.

It is understood that when the wefts are cut between two sections the ends of the wefts projecting from the uppermost warp-threads must spring back to the position described, as there is then no connection with the warps of the next following section, and consequently they have no support for holding the same in the inclined position shown in Fig. 1. Thus a fabric is produced having a central warp, with wefts passing around the same, and carrying on opposite sides of the central warp sets of warps, as will be readily understood by reference to Fig. 2.

As illustrated in Fig. 3, a fabric can be formed in which only one section is woven, and in this case the same wefts return to form a single weft-thread for two corresponding sets of warps on opposite sides of the central warp A. In this case in order to form the tufts it is necessary to cut the loops at opposite ends of the weft-threads.

As illustrated in Fig. 4, I bind the central warp A' by additional sets of warps E E' and weft-threads E², binding the warps E E', as well as the central warp A'. By cutting two adjacent sections on the line indicated in Fig. 4 a fabric will be produced having the appearance shown in Fig. 5, in which the central warp A' is securely bound in place by the additional set of warps E E' and weft-threads E².

It will be observed that some of the wefts extend downward to the central warp, and, after passing under the same, extend upward, thus forming a bend at the central warp, while other wefts extend upward to the said warp, pass over the same and then downward, so that the central warp is firmly bound by the wefts.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. As a new article of manufacture, a woven chenille fabric, comprising a central warp, separate sets of warps on opposite sides of the said central warp, and wefts binding the said central warp and the said separated sets of warps, some of the wefts passing upward to the said central warp, then over the same, and then downward on the other side thereof, while other wefts pass downward to the central warp, then under the same, and then upward on the other side thereof, the ends of the wefts projecting from the outermost warp threads in the several sets to form tufts or loops, substantially as shown and described.

2. As a new article of manufacture, a woven chenille fabric, comprising a central warp, separate sets of warps on opposite sides of the said central warp, and wefts binding the said central warp and the said separated sets of warps, some of the wefts passing upward to the said central warp, then over the same, and then downward on the other side thereof, while other wefts pass downward to the central warp, then under the same, and then upward on the other side thereof, the ends of the wefts projecting from the outermost warp threads in the several sets to form tufts or loops, some of the corresponding sets of warps bound by the same wefts being arranged in different horizontal planes, substantially as shown and described.

3. As a new article of manufacture, a woven chenille fabric, comprising a central warp, separate sets of warps on opposite sides of the said central warp, and wefts binding the said central warp and the said separate sets of warps, the wefts being so interwoven with the sets of warps on opposite sides of the central warp as to pass over or under the said central warp and form a bend where they bind the same, the ends of the wefts projecting from the outermost warp threads to form tufts or loops, substantially as described.

4. As a new article of manufacture, a strand of chenille, comprising separated sets of warps, a central warp, and wefts extending radially from the separate sets of warps to the central warp, said wefts binding the central warp and the separate sets of warps, and forming bends where they pass over or under the central warp, the ends of the wefts projecting from the outermost warp threads to form tufts or loops, substantially as described.

LEEDHAM BINNS.

Witnesses:

J. MARTIN ROMMEL,
JAMES D. WINCHELL.