

No. 699,616.

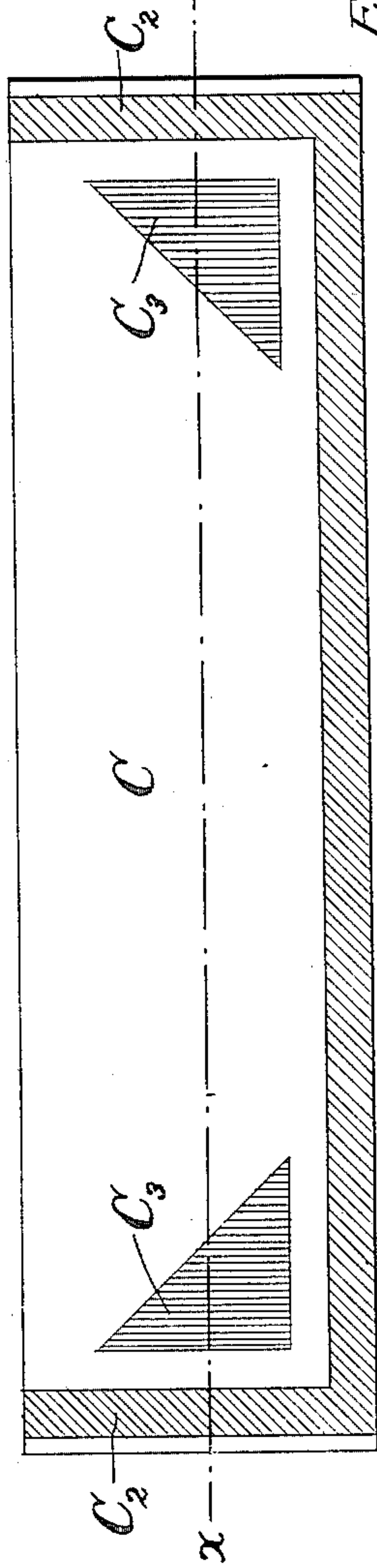
Patented May 6, 1902.

J. W. DIMICK, JR. & J. JAGGER.
VELVET CARPET AND PROCESS OF MAKING SAME.

(Application filed Jan. 27, 1902.)

(No Model.)

Fig. 1,



WITNESSES:
Jessie B. Kay
Alexander Mitchell

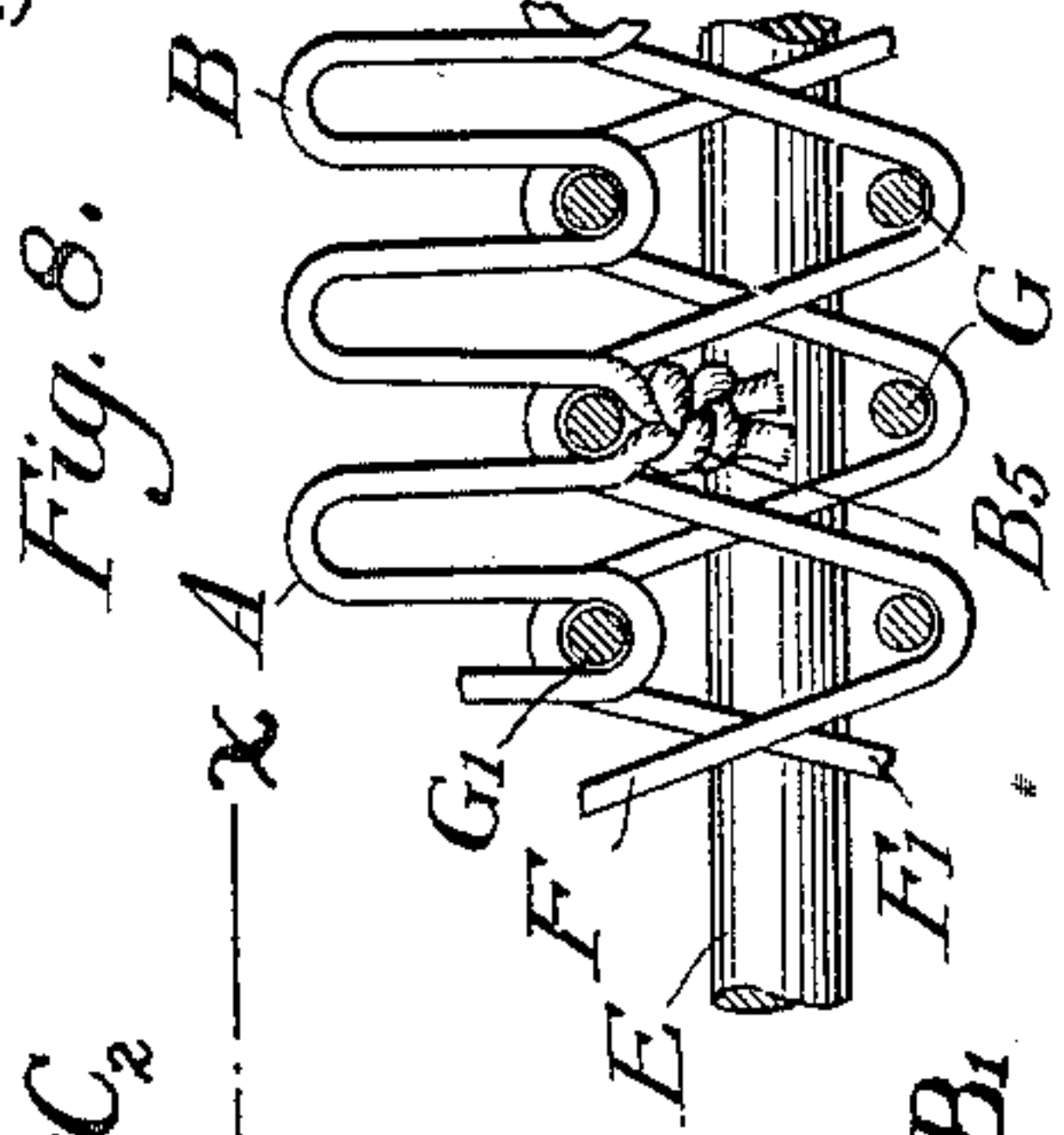


Fig. 3,

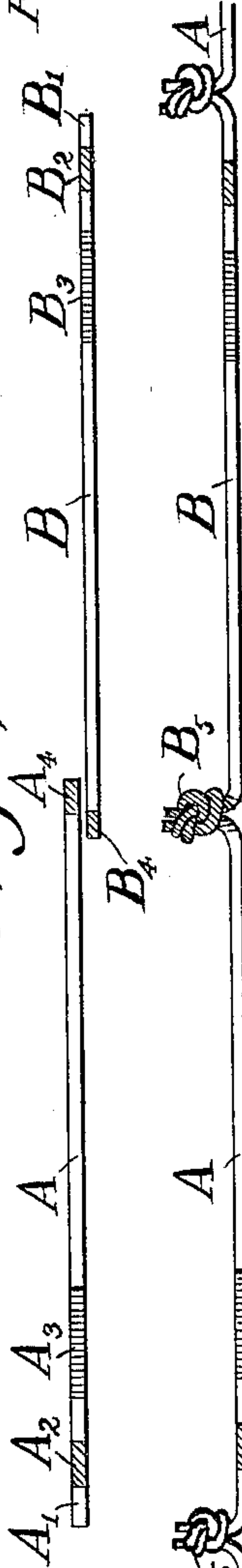


Fig. 4,

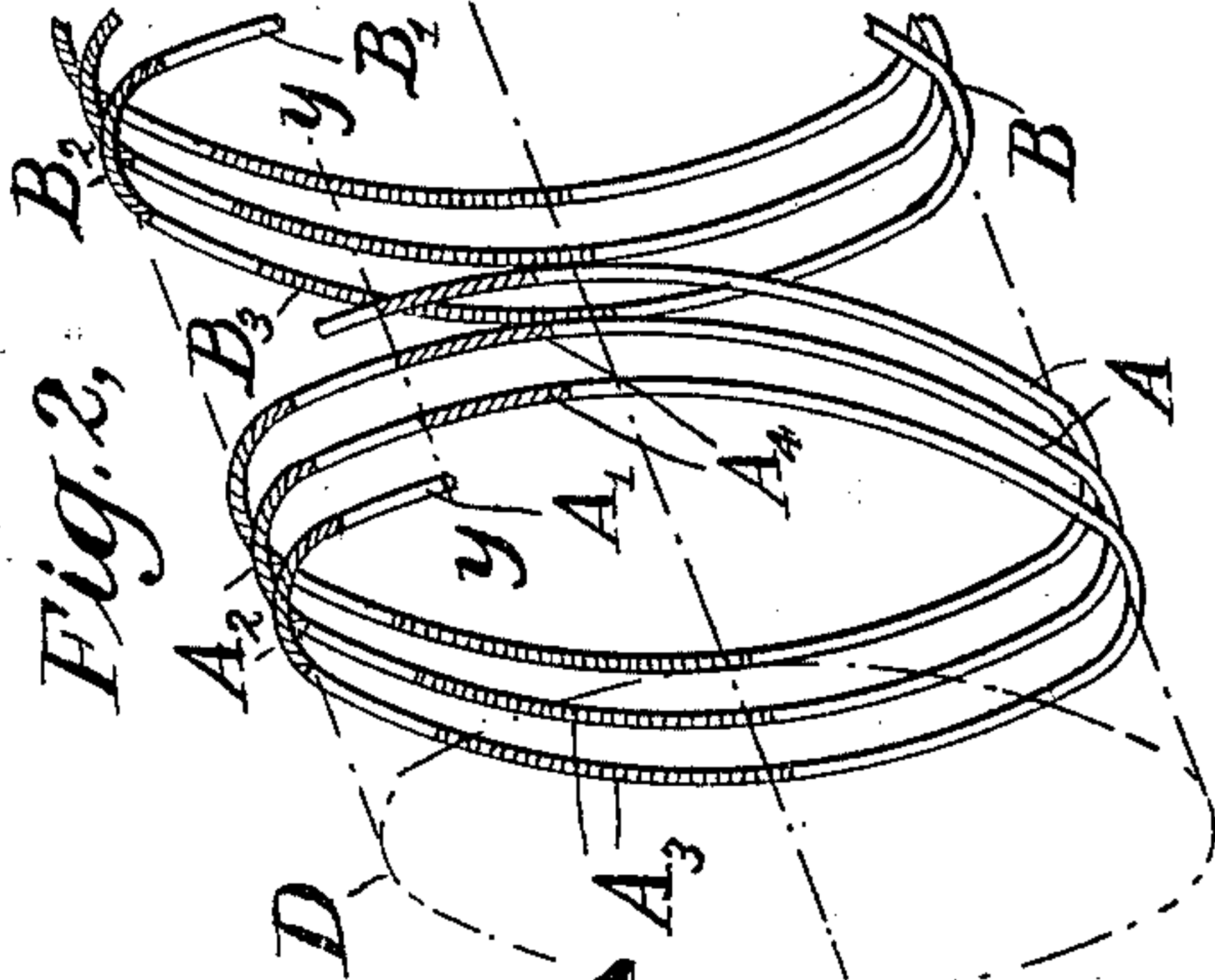
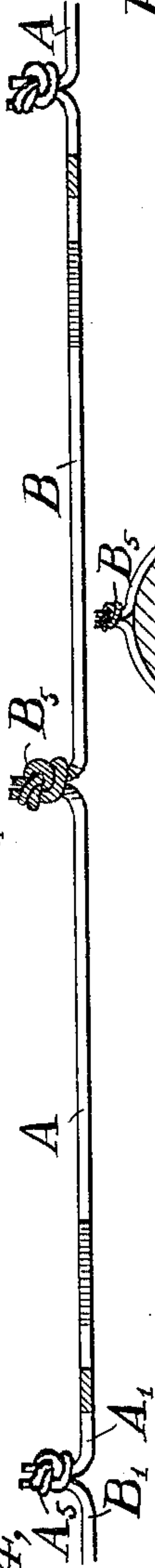


Fig. 5,

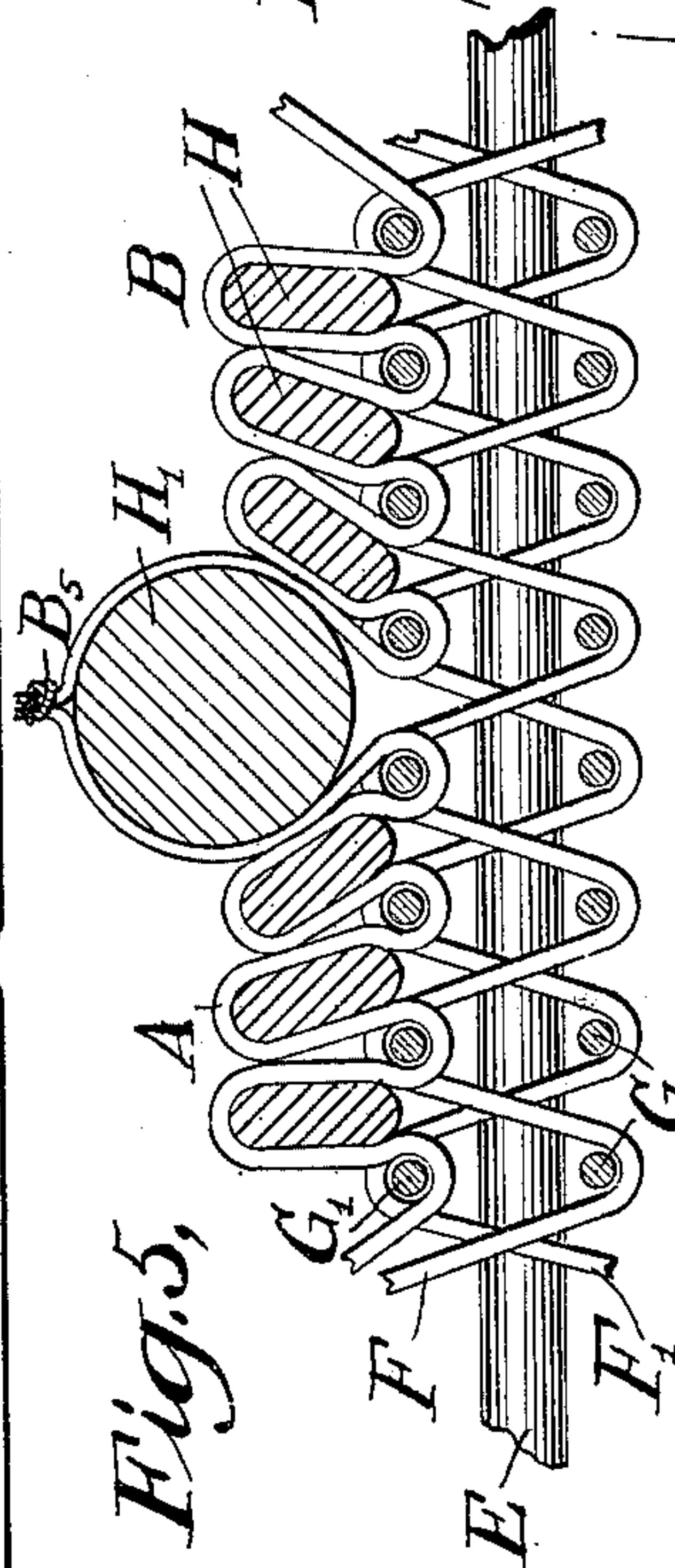


Fig. 6,

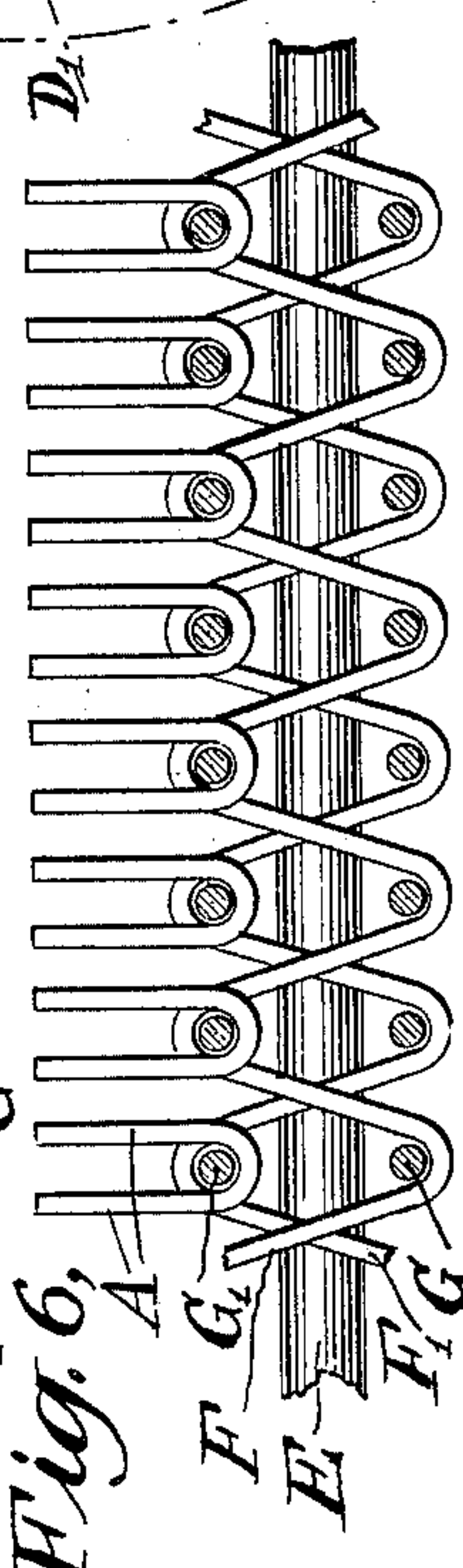
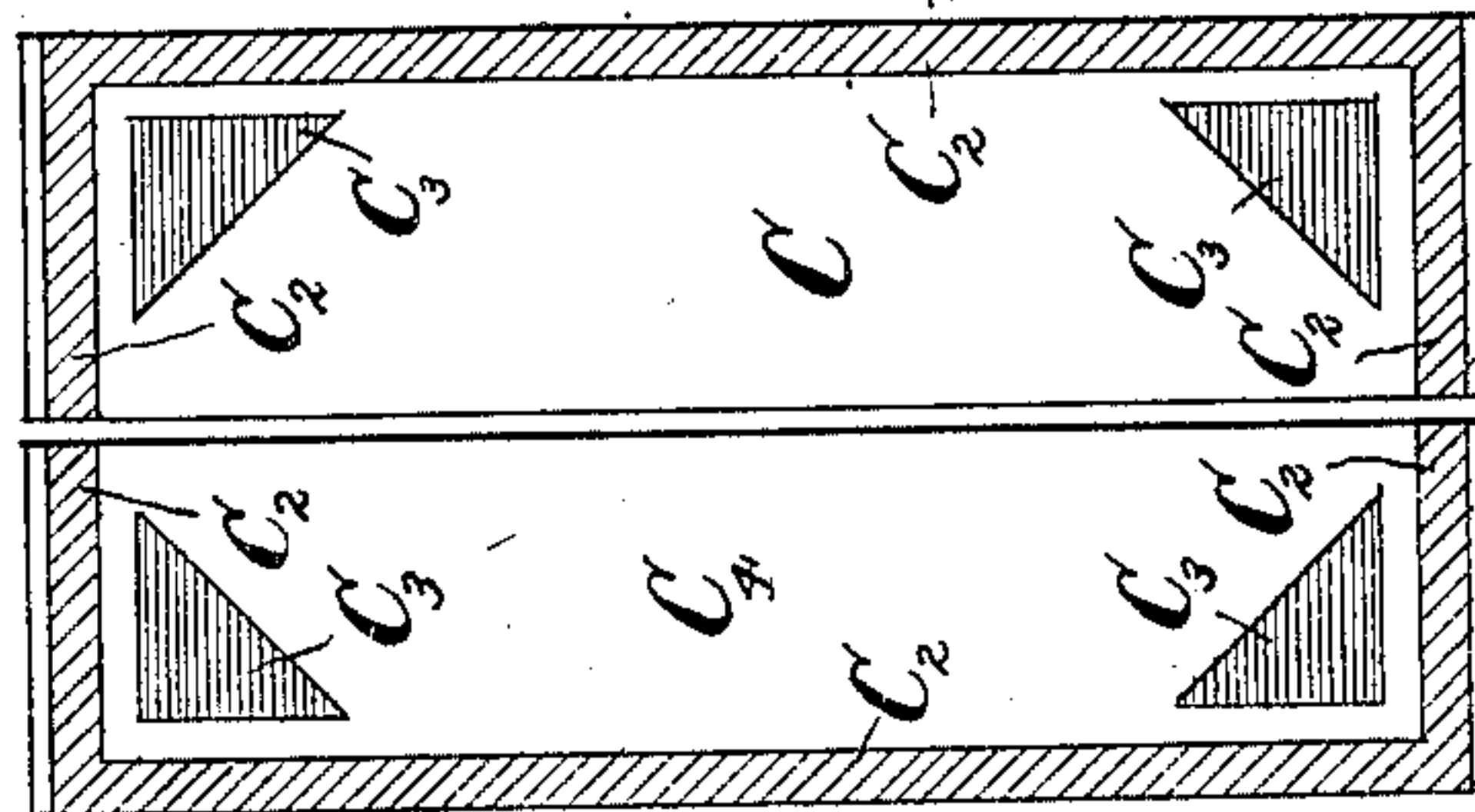


Fig. 7,



INVENTORS
Jeremiah W. Dimick Jr.
Joseph Jagger.

BY
Frederick S. Duncan
ATTORNEY

UNITED STATES PATENT OFFICE.

JEREMIAH W. DIMICK, JR., AND JOSEPH JAGGER, OF RIFTON, NEW YORK.

VELVET CARPET AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 699,616, dated May 6, 1902.

Application filed January 27, 1902. Serial No. 91,310. (No specimens)

To all whom it may concern:

Be it known that we, JEREMIAH W. DIMICK, Jr., and JOSEPH JAGGER, citizens of the United States, and residents of Rifton, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Velvet Carpet and Processes of Making the Same, of which the following is a specification, taken in connection with the accompanying drawings, forming a part of the same.

This invention relates to velvet carpet or other fabric having printed pattern-warps, and relates especially to carpet or large rugs of this description having large pattern elements. These pattern-warps are printed or otherwise colored to form a sectional design and are before weaving them into the fabric joined to form compound pattern-warps which embody the compound design of the completed fabric.

In the accompanying drawings, illustrating one embodiment of this invention, and in which the same reference characters refer to similar parts throughout the various figures, Figure 1 is a diagrammatic view of one of the strips. Fig. 2 is a diagrammatic view illustrating the printing of the warp-sections. Figs. 3 and 4 show the formation of the compound warp-threads. Figs. 5 and 6 illustrate the structure of the fabric. Fig. 7 is a diagrammatic view showing the arrangement of the several strips used to form the rug. Fig. 8 illustrates a modified form of fabric.

The rug illustrated in the drawings and embodying this invention is composed of a number of strips, preferably symmetrical about the middle of the rug, two of such strips being shown in Fig. 7. The right-hand strip C is formed with a border element C², extending around three sides of the same, and with the corner designs C³, which represent conventionally a rug design. The left strip C⁴ is formed symmetrical to the strip C about the middle line of the rug and has the corresponding pattern elements C² and C³. It will be understood, of course, that the two strips are sewed or otherwise joined together to form the rug. They are, however, shown as separated in Fig. 7 to bring out their structure more clearly.

The right strip (illustrated on a larger scale in Fig. 1) comprises compound pattern-warps,

the formation of one of these warps, such as occurs along the line *xx* of Fig. 1, being indicated in Figs. 3 and 4, which are drawn on a different scale to present in a more simple manner the relation between the strip C and the pattern elements in the warp-thread. This compound warp-thread, as illustrated in Fig. 4, is composed of the direct warp-thread B and the reverse warp-thread A, tied together by the knots A⁵ and B⁵, which occur at the border ends and center of the pattern, respectively. It will be seen that both the direct and reverse warp-threads forming the pattern-warp comprise the pattern elements A², B², A³, and B³ and the knotting-sections A', B', A⁴, and B⁴, these pattern elements producing the portions C² and C³ of the strip C. The two sections of the pattern-warp are symmetrical about the center knot B⁵, and therefore the pattern of the strip C is symmetrical about the middle of the same. These sectional pattern-warps are produced as follows: The warp-threads are wound upon the printing-drum D (indicated in Fig. 2) by the revolution of this drum about its axis D'. Several skeins A and B are wound upon the drum, as indicated, and these sections are simultaneously printed, so that each turn of the warp-threads upon the drum is printed with color-strips extending parallel to the axis of the drum. In this way the pattern-sections A² and B² are similarly colored, and the pattern-sections A³ and B³ are also of the same color and have the same length in each of the threads in skein A and skein B. At the same time that the pattern-sections are printed upon the warp-threads the knotting-sections A', B', A⁴, and B⁴ are also printed in some distinctive color to enable them to be readily determined during their subsequent manipulation. These sections of warp-thread are in this way printed with a quarter-section design or pattern and with knotting-sections at the ends of said quarter-section design. After printing the warp-skeins are removed from the drum and treated in the usual way to fix the color. These skeins when they are spooled in the ordinary way or in any desired manner are wound differently, the end B' being led off first from skein B, for instance, while the opposite end of the skein A is led off first, so that skein B

is wound to produce a direct spool, while skein A is wound into a reverse spool of pattern-warp. The different direct warp-threads are formed into a direct warp by the usual method, employing, if desired, the ordinary setting-frame and warping-machine, so as to produce a direct warp. The reverse-warps are beamed in a similar manner to produce a reverse warp-beam. These direct and reverse warps are then used to form a compound beam of warp, the individual warp-threads being severed at the knotting-sections along the line *yy* of Fig. 2 and united properly at the center and border of the pattern in every case by the knots B⁵ and A⁵ (indicated in Fig. 4) or in any other desired way, the compound warp-threads being wound upon a beam in any desired manner to form a compound pattern-warp, in which the pattern element is substantially twice the length of the quarter-section pattern warp-threads as they are printed upon the drum. It will of course be understood that it is not necessary to conduct these operations in exactly the order which has been described, since the knotting-sections of the direct and reverse warp-threads in the skeins A and B could be united in a proper manner and the warp-threads spooled as a compound warp and subsequently beamed. Instead of uniting two warp-sections to form a compound warp it is of course possible to unite any other desired number of properly-printed sectional pattern-warps to form a compound warp; and also sectional pattern-warps of any character might be united, as indicated, to form a compound pattern-warp.

The beam of compound warp is woven as the pattern-warp in the ordinary way, using, preferably, a two-shot carpet-loom of ordinary construction, which produces a fabric of the kind illustrated in Figs. 5 and 6. This fabric comprises the stuffer-warp E, the binding-warps F F', the compound pattern or facing warp A B, and the filling-threads G G', which alternately occur above and below the stuffer-warp, as indicated. The loops indicated are formed in the pattern-warp by the pile-wires H, and these loops in cut velvet are severed by the withdrawal of the pile-wires in the usual manner. When in weaving up the pattern-warps the row of knots B⁵, occurring at the center of the pattern, are reached, the loop-rod H' is inserted in the shed, so as to raise each one of the transverse row of center knots above the surface of the fabric, as indicated in Fig. 5. After the weaving has proceeded sufficiently this loop-rod H' is cut out by severing the pattern-warps near the knots, and the extra length of knotting sections or threads at this point are removed in any desired way. Any inequalities in the height of the velvet at this point may of course be removed by a shearing-machine of the ordinary construction, which clips the surface of the velvet accurately, producing the velvet fabric diagrammatically indicated in Fig. 6.

The end knots A⁵ are preferably removed from the fabric by inserting a rod similar to H' and lifting the pattern-warps at this point sufficiently high so that the filling-threads do not engage with them. In this way a heading of ordinary construction is formed, and the pattern-warps are cut away at this heading. If desired, however, the weaving of the compound warp might be accomplished in any other way, and the knots or other means of joining the compound warp-threads might be woven into the backing, as shown in Fig. 8, which would be desirable in an uncut-pile fabric. The knots or other joining means B⁵ between the sectional warp-threads A and B are woven into the backing, so as to be removed from the face of the uncut-pile fabric. In this way the full-length strip C on the right side of the rug is produced, embodying two quarter-section designs symmetrically placed about the middle of the strip. The strip C⁴ on the left side of the rug, as indicated in Fig. 7, is formed in a similar manner, the compound warps being similarly produced to form a beam of compound warp, and then this warp-beam is turned from right to left in the loom, so as to bring the border-warps on the other side of the strip C⁴. In this way the strip C⁴ is symmetrical to the strip C about the center of the rug, and since both strips may be formed from pattern-warps printed at the same time upon the printing-drums the colors of the pattern and the various design elements are exactly reproduced in their proper places in the various strips. By reversing the compound warp-beam in this manner the texture of the velvet carpet produced is exactly similar in both of the strips C and C⁴. Instead of the reversal of the pattern-warp taking place after the compound warp-beam has been combined it might occur at any other stage of the process, so long as all the compound warps are reversed in position as they are woven into the carpet.

Instead of printing pattern-warps with a quarter-section design and tying the knotting-sections of these warps properly and weaving two symmetrical strips, as has been described, the rug might be formed of more than two strips, although it would be desirable to have each of the strips symmetrical to the corresponding strip on the other side of the rug. Many other modifications might be made without departing from the spirit of this invention. Furthermore, parts of this invention may be employed without using all of the same, and parts of this invention may be used in connection with other expedients in this art. Furthermore, it is immaterial, as has been explained, in what order the various steps of making this carpet are taken, and we do not therefore wish to be limited to the exact order of these various steps which is mentioned in the claims.

We do not wish to be limited to the disclosure which we have made in this case; but what we claim as new, and what we wish to

secure by Letters Patent, is set forth in the appended claims.

What is claimed as new is—

1. The process of making carpet comprising
5 printing warp-threads with a quarter-section design and with knotting-sections at the ends of said quarter-section design, spooling and beaming the part of said warp-threads to form a direct warp, spooling and beaming another
10 part of said warp-threads to form a reverse warp, severing and knotting said knotting-sections of said direct and reverse warps to form a compound warp composed alternately of direct and reverse warp-sections, weaving
15 a velvet carpet with said compound warp as a pattern-warp, inserting a loop-rod under the knots in said compound warp at the center of the pattern to raise said knots from the surface of the fabric, cutting out said loop-rod and removing the upstanding ends of said knotting-sections to form a full-length strip comprising two symmetrical quarter-section patterns; in reversing said compound warp from right to left and in weaving a
20 similar full-length strip therefrom to produce a second strip symmetrical to the first.

2. The process of making carpet which comprises printing pattern-warps with a quarter-section design and with knotting-sections at
30 the ends of said quarter-section design, severing said pattern-warps at said knotting-sections, uniting and assembling said pattern-warps to form a compound pattern-warp having a full-length symmetrical design comprising two of said quarter-section designs and weaving said compound warp as the pattern-warp of a carpet to produce a strip comprising two of said quarter-section designs.

3. The process of making carpet which comprises printing warp-threads with a quarter-section design, severing, joining and assembling said warp-threads to form a compound warp comprising two of said quarter-section designs and weaving said compound warp as
45 the pattern-warp of a carpet to produce a strip comprising two of said quarter-section designs symmetrical about the middle of said strip.

4. The process of making carpet which comprises printing warp-threads with a quarter-section design and producing a fabric from said warp-threads after joining the same, said fabric comprising a design formed of two of said quarter-section designs symmetrically
55 arranged.

5. The process of making fabric which comprises printing warp-threads with a sectional design and with knotting-sections, severing said warp-threads at said knotting-sections,
60 uniting and assembling said warp-threads to form a compound warp embodying a series of said sectional designs and weaving said compound warp to produce a pattern fabric embodying a multiple design.

6. The process of making fabric which consists in producing colored warp-threads, uniting and assembling said warp-threads to pro-

duce a compound warp embodying a compound design and in weaving said compound warp to produce a fabric embodying said compound design. 70

7. The process of making fabric which consists in printing warp-threads with a sectional design, uniting and assembling said warp-threads to form a compound warp embodying
75 a multiple design and in weaving said warp.

8. The process of making fabric which comprises printing warp-threads with a sectional design, uniting said warp-threads to form a multiple warp and producing a fabric from
80 said multiple warp embodying a multiple design formed of a plurality of said sectional designs.

9. A carpet formed of right and left hand strips said strips comprising symmetrical pattern-warps formed of united sectional warps printed with a sectional design and united symmetrically. 85

10. A carpet comprising compound pattern-warps symmetrical about the center of the same, said compound warps being formed of sectional pattern-warps symmetrically united. 90

11. A carpet comprising compound pattern-warps symmetrical about the center of the same, said compound warps being formed of
95 two quarter-section pattern-warps symmetrically united.

12. A carpet comprising symmetrical pattern-warps formed of sectional warps printed with a quarter-section design and united symmetrically. 100

13. A fabric comprising compound pattern warp-threads, said compound warp-threads being formed of joined sectional warp-threads.

14. A fabric comprising compound pattern warp-threads said compound warp-threads being formed of joined colored sectional warp-threads. 105

15. A compound warp composed of sectional warp-threads printed with a quarter-section design and with knotting-sections and united at said knotting-sections to form compound warp-threads having a symmetrical design formed of two of said quarter-section designs. 110

16. A compound warp formed of a plurality of sectional pattern-warps united to form a compound design comprising said sectional designs. 115

17. The process of forming a compound warp which consists in printing warp-threads with a quarter-section design and with knotting-sections, in severing said warp-threads and uniting said knotting-sections to form a compound warp having symmetrically-arranged quarter-section designs. 120

18. The process of forming a compound warp which consists in printing warp-threads with a quarter-section design, in severing and uniting said warp-threads to form a compound warp having symmetrically-arranged quarter-section designs. 125

19. The process of producing a compound warp which consists in printing warp-threads with a sectional design, in severing and unit-

ing said warp-threads to produce a warp having a compound design composed of said sectional designs.

20. The process of producing a compound warp which consists in producing colored warp-threads, in uniting and in assembling said warp-threads to produce a warp having a compound design.

21. The process of producing a compound warp which consists in printing warp-threads

with a sectional design and in uniting said warp-threads to produce a warp having a compound design composed of said sectional designs.

J. W. DIMICK, JR.
JOSEPH JAGGER.

Witnesses:

THOMAS MOORE,
HECTOR OSTERHOUDT.