

(Specimens.)

2 Sheets—Sheet 1.

J. CRABTREE.  
CHENILLE FABRIC.

No. 409,931.

Patented Aug. 27, 1889.

FIG. 1.

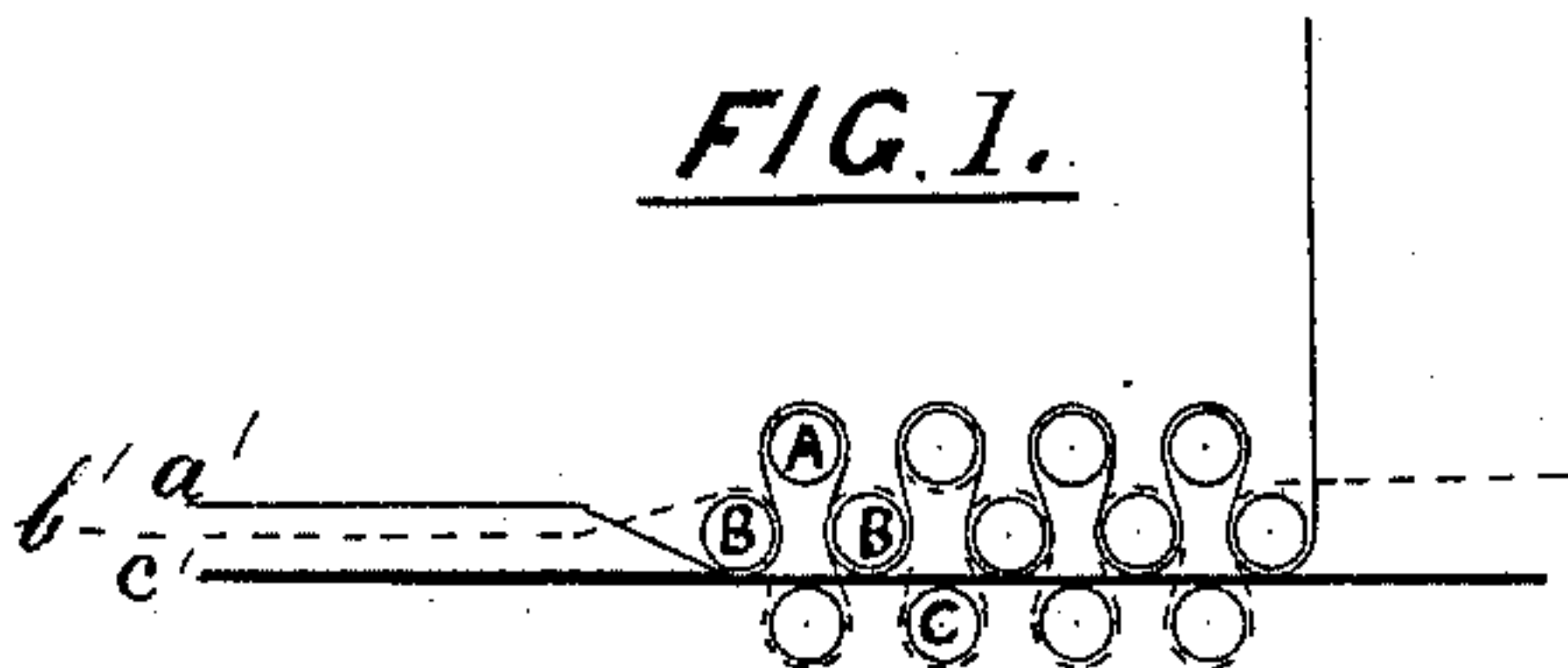


FIG. 2.

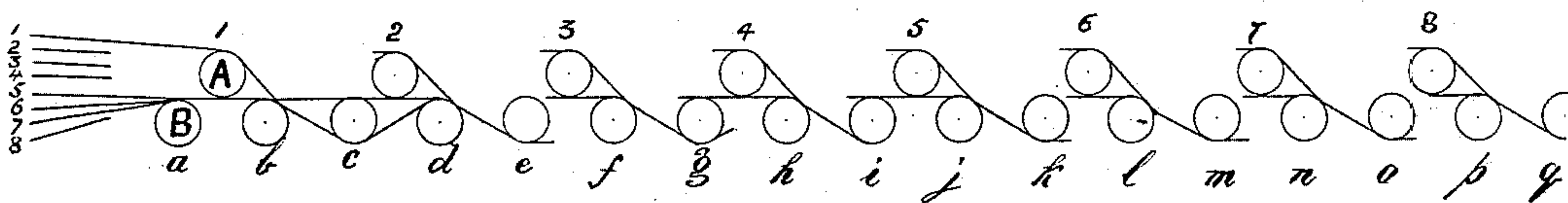
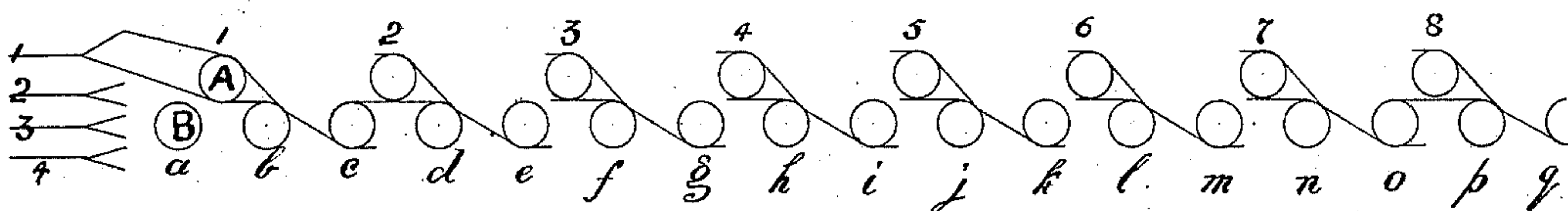


FIG. 3.



INVENTOR.

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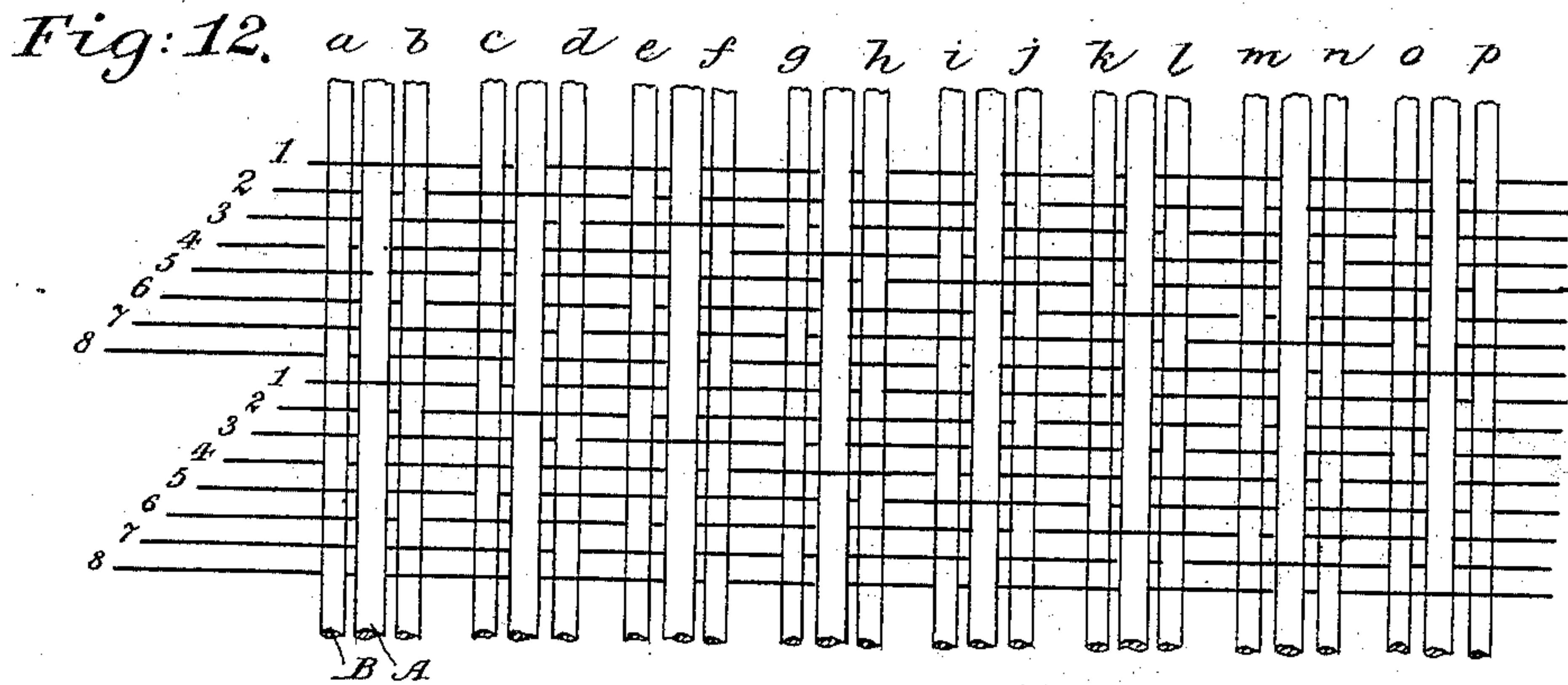
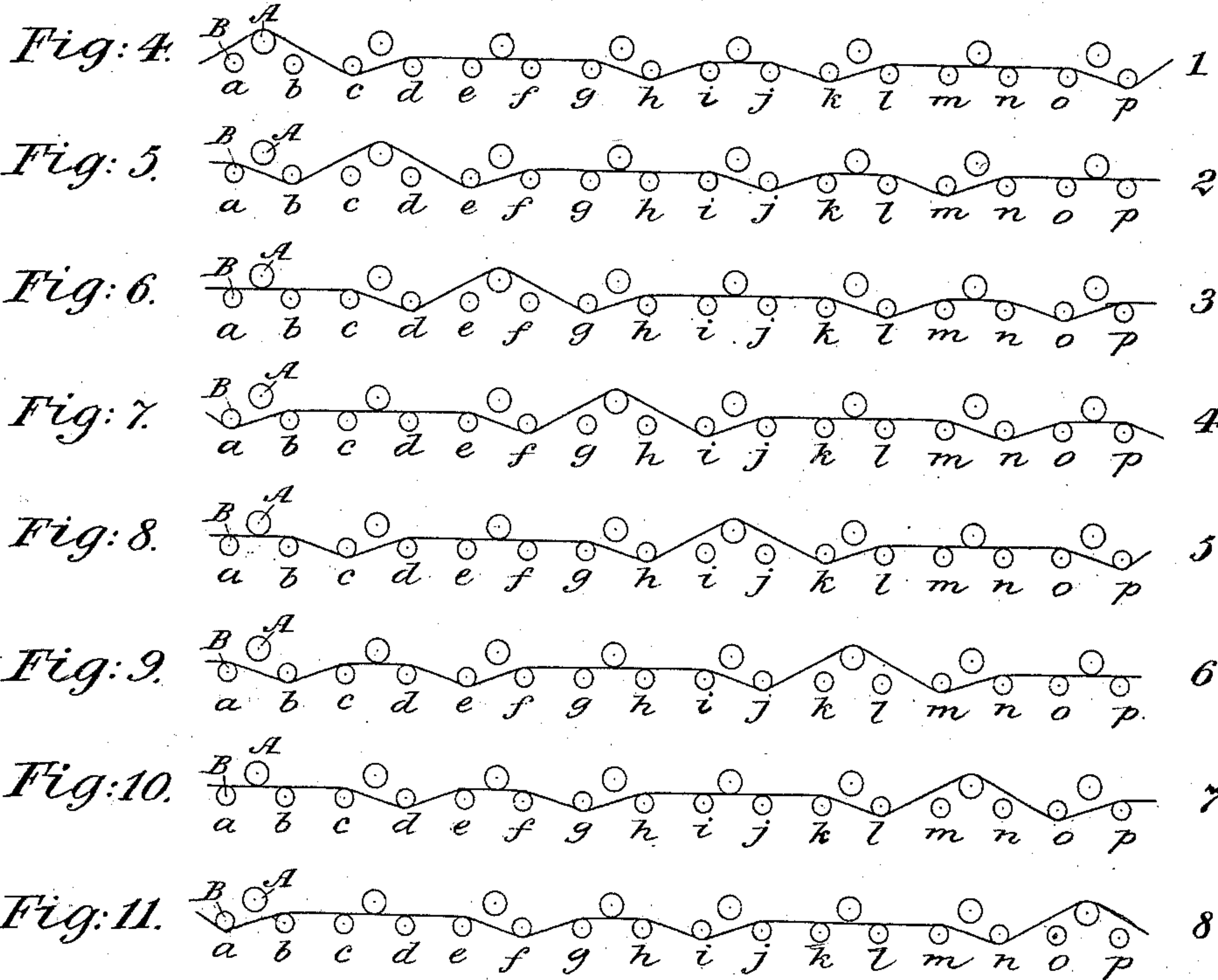
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INVENTOR:

*James Crabtree*

WITNESSES:

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*J. H. Caplinger*

By *Henry Conner*  
Attorney.



# UNITED STATES PATENT OFFICE.

JAMES CRABTREE, OF HECKMONDWIKE, COUNTY OF YORK, ENGLAND.

## CHENILLE FABRIC.

SPECIFICATION forming part of Letters Patent No. 409,931, dated August 27, 1889.

Application filed September 18, 1888. Serial No. 285,682. (Specimens.) Patented in England July 6, 1888, No. 9,840.

*To all whom it may concern:*

Be it known that I, JAMES CRABTREE, a subject of the Queen of Great Britain, and a resident of Heckmondwike, county of York, England, have invented certain Improvements in Chenille Fabrics, (for which a patent has been granted in Great Britain, dated July 6, 1888, No. 9,840,) of which the following is a specification.

My invention relates to what are known as "chenille fabrics," and especially chenille carpets, rugs, and mats, in which the chenille weft is thrown up to form a pile face, which may be plain, but is usually figured.

The object of my invention is to provide a chenille fabric having but one face, or in which the chenille appears only on one face, and in which only one warp is employed, this warp serving both as a binder-warp for the chenille weft and backing-weft and as a stuffer-warp.

In the accompanying drawings, illustrative of my invention, Figure 1 is a sectional view on a large scale, illustrating the arrangement of the warps and wefts in an imitation Axminster or chenille carpet. Fig. 2 is a diagrammatic view illustrating the construction of my chenille fabric. Fig. 3 is a similar view to Fig. 2, illustrating the construction of my chenille fabric in a slightly-different manner. Figs. 4 to 11, inclusive, are diagrammatic views illustrating the positions, respectively, of the several sections of the warp, as will be hereinafter explained. Fig. 12 is a diagrammatic plan view of a part of the fabric, also illustrating the arrangement of the sections of the warp and the threads of the weft.

In order to make more clear the weave of my chenille fabric, I will first briefly describe the arrangement of the warps and wefts in the fabric illustrated in Fig. 1. In this view, A represents the fur weft, and B and C linen wefts. The weft A forms the face of the fabric. In weaving this fabric two or more warp-beams are employed. *a'* represents the binder-warp for the fur weft A, each thread of this warp passing under the middle weft B and over the fur weft A alternately, as shown.

*b'* represents in dotted or broken lines the binder-warp for the backing-weft C, each thread of this warp passing over the weft B

and under the weft C alternately, as shown. The backing-weft C is not bound directly to the fur weft A by the warp.

*c'* represents by a heavy full line the stuffer-warp, which passes straight through the fabric between the wefts B and C.

In my fabric only one warp and warp-beam are employed, and this warp serves to bind the backing-weft to the fur or chenille weft, and also serves as a stuffer-warp. There is no separate straight stuffer-warp corresponding to the warp *c'* in Fig. 1. In my fabric also the chenille weft appears only on the face of the fabric and not on both back and face, as in some chenille fabrics, and notably that described in the British patent of Lyle, No. 12,463, of September 14, 1887.

I will now describe the construction of my fabric, referring to Figs. 2, 4, 5, 6, 7, 8, 9, 10, 11, and 12 for illustration. In these figures, A is the chenille weft, and B the weft which forms the back of the fabric. According to this arrangement there are two shots of the backing-weft B to one shot of the chenille weft A. In making the fabric the single warp is divided up into eight sections, and the warp-threads of these sections are numbered from 1 to 8 in the drawings. For convenience in describing the construction I have shown eight chenille-weft shots A and sixteen weft-shots B, and have lettered these latter shots *a b c d*, &c. Fig. 4 represents the course of section 1 of the warp. Fig. 5 represents the course of section 2 of the warp. Fig. 6 represents the course of section 3, and so on for the eight sections of the warp. Fig. 12 represents the arrangement of the warp-threads as seen in plan. Warp-section 1 passes over the first chenille-weft shot A (see Fig. 4) and over the backing-weft shots *a* and *b*, then under backing-weft shot *c* to serve as a binding-warp, then over backing-weft shots *d e f g* to serve as a stuffer-warp, then under backing-weft shot *h* for binding, then over weft-shots *i* and *j* for stuffing, then under weft-shot *k* for binding, and over shots *l m n* for stuffing, and then under weft-shot *p* for binding. The course of this section 1, as described, is repeated for every eight successive chenille-weft shots in length of the fabric—that is, after passing under the backing-weft



shot *p* this section 1 of the warp will pass over the ninth chenille-weft shot, which is not shown in the drawings. The respective courses of the other sections of the warp 2 3 4, &c., will be precisely the same as that of section 1, except that each successive section will pass over and bind that shot of the chenille weft which corresponds with it in number. For example, in this case there are 10 eight sections of the warp, and the threads of section 1 will pass over and bind the first chenille-weft shot, the threads of section 2 will pass over and bind the second or next succeeding chenille-weft shot, the 15 threads of section 3 will pass over and bind the third or next succeeding chenille weft shot, and so on. Where the warp is thus divided into eight sections, every ninth warp-thread will pass over and bind the same chenille-weft shot. This is clearly seen in Fig. 12. Also, where the warp is divided into eight sections, as described, any given warp-thread will pass over and bind only every eighth chenille-weft shot, passing under all the intermediate 25 chenille shots. Each of the eight divisions or sections of the warp is controlled by its own gears or harness. All the threads numbered 1 belong to one section, all the threads numbered 2 to another section, and so on. If we 30 have eleven hundred and fifty-two threads of warp in a fabric thirty-six inches wide woven according to my invention, we will have four threads to the inch passing over and binding the chenille weft.

35 The characteristic feature of my fabric is the use of but one warp, the threads of which pass over the chenille, then under the backing-weft, and then lie between the wefts until, in the progress of weaving, they are again 40 required either on the face or back of the fabric to bind the wefts together. Thus it will be seen that the same warp becomes a binder both at the face and at the back, and also serves as a stuffer or dead warp.

45 In the diagram, Fig. 3, I show a slightly-modified construction, in which, as before,

only one warp is employed, which serves as a binder for both the chenille and backing weft, and also as a stuffing-warp. In this modified construction the warp is divided into four 50 sections, but each section is again divided by the harness or jacquard, these sections of the warp occupying the positions represented in Fig. 3. The warp-threads of section 1 are divided and surround the first chenille weft 55 A and then pass under the backing-weft B. The threads of section 2 surround the second chenille weft and then pass under the backing, the threads of section 3 surround the 60 third chenille weft, and so on. By dividing the warp into eight sections and passing the threads of each section over and under the weft-threads in the manner described and shown a strong and durable fabric is produced, which presents a different aspect from 65 fabrics of this general class woven in the usual way.

Having thus described my invention, I claim—

1. As an improved article of manufacture, 70 a fabric whereof the fur or chenille weft appears only on one face, said fabric consisting of a fur or chenille weft, a backing-weft, and a single warp, which latter binds together the two wefts, and serves also as a stuffer-warp, 75 as set forth.

2. As an improved article of manufacture, a fabric wherein the fur or chenille weft appears only on one face, said fabric consisting of a fur or chenille weft, a backing-weft, and 80 a single warp which binds together the two wefts, and serves also as a stuffer-warp, said warp being divided into sections, as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing 85 witnesses.

JAMES CRABTREE.

Witnesses:

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