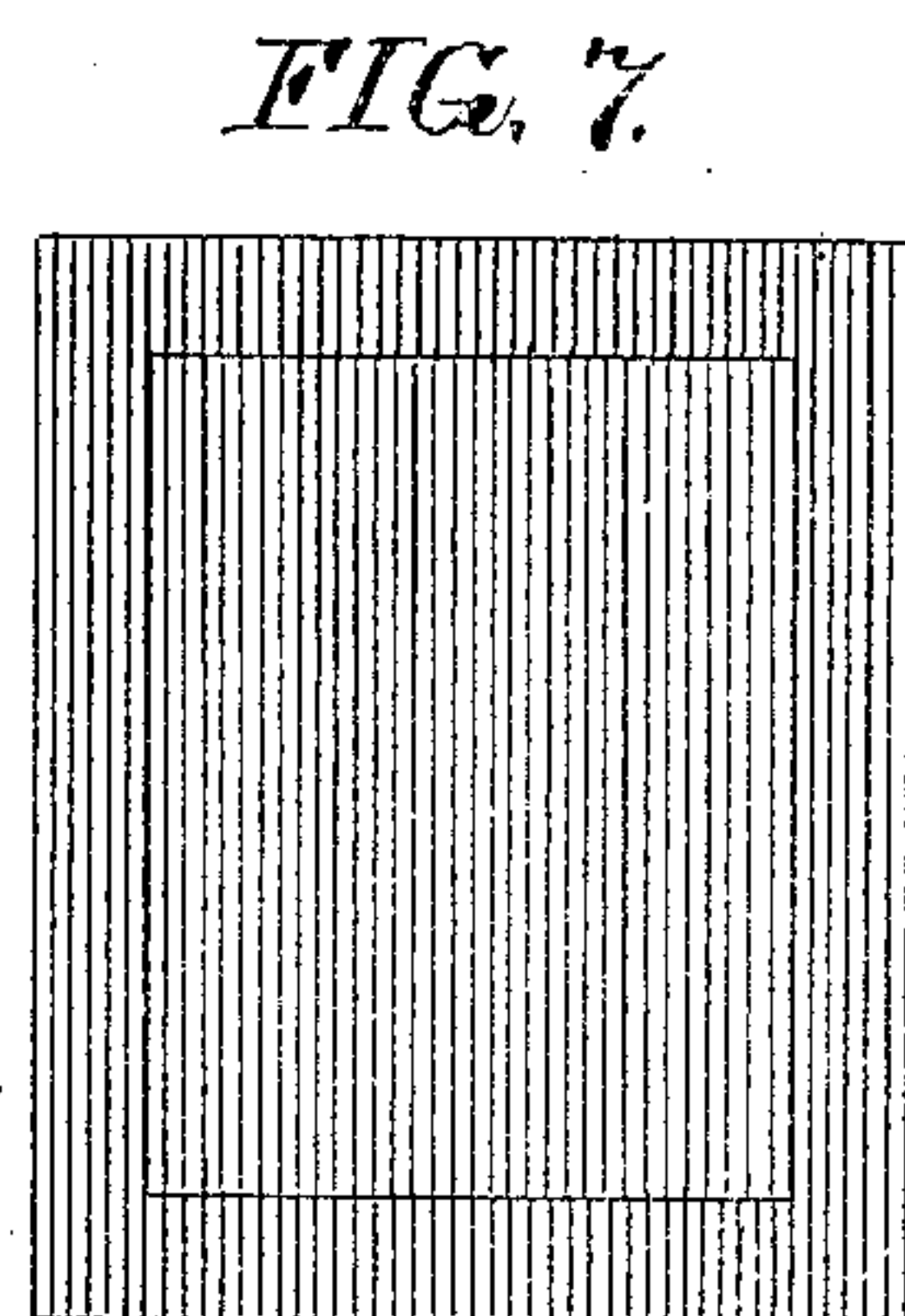
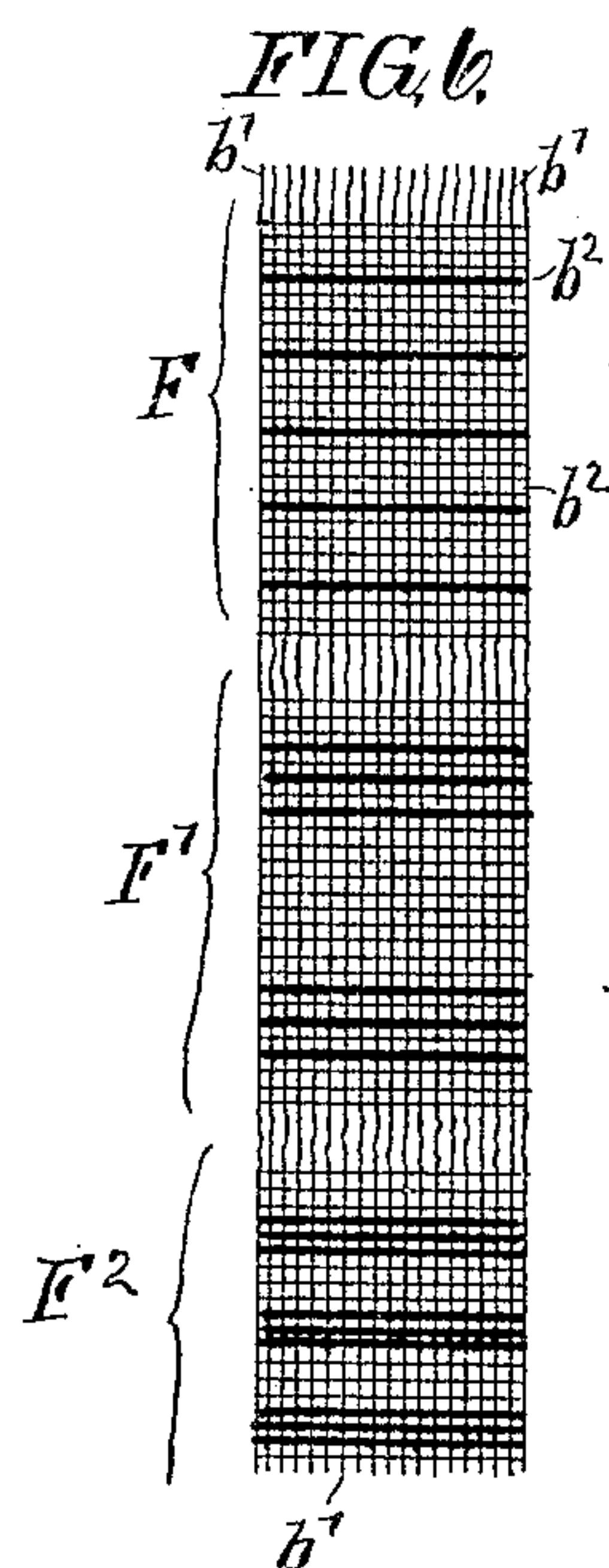
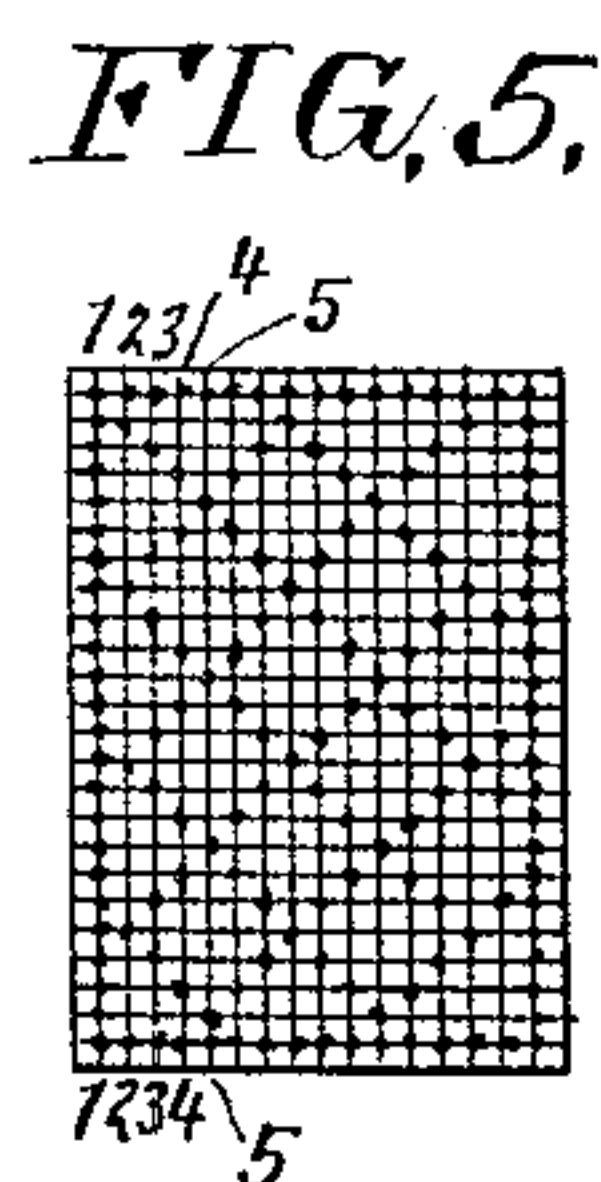
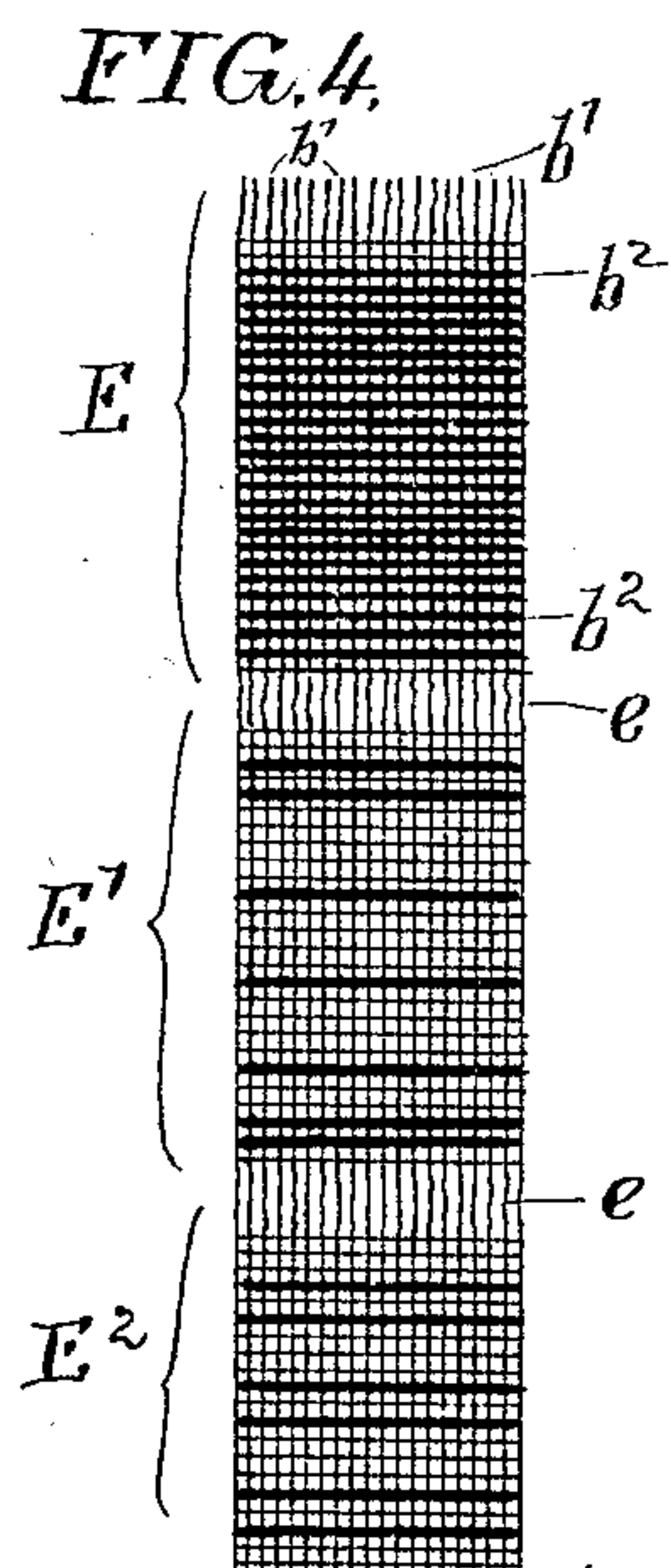
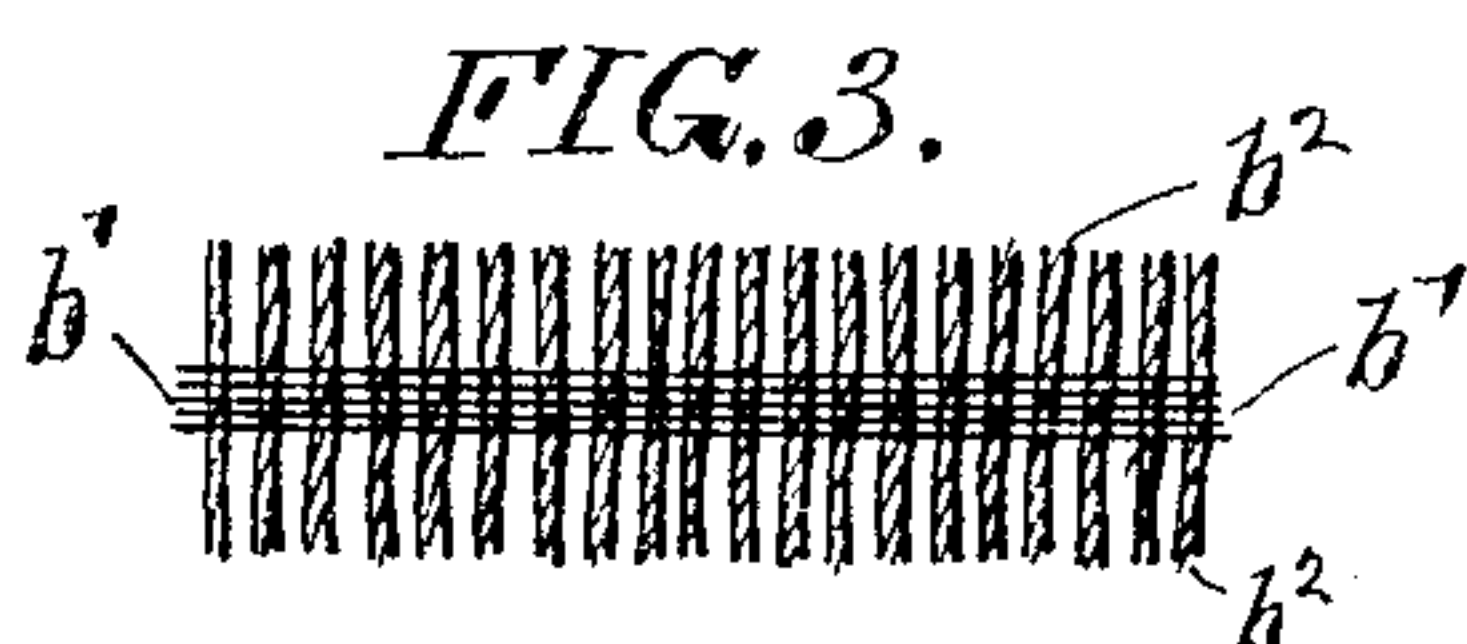
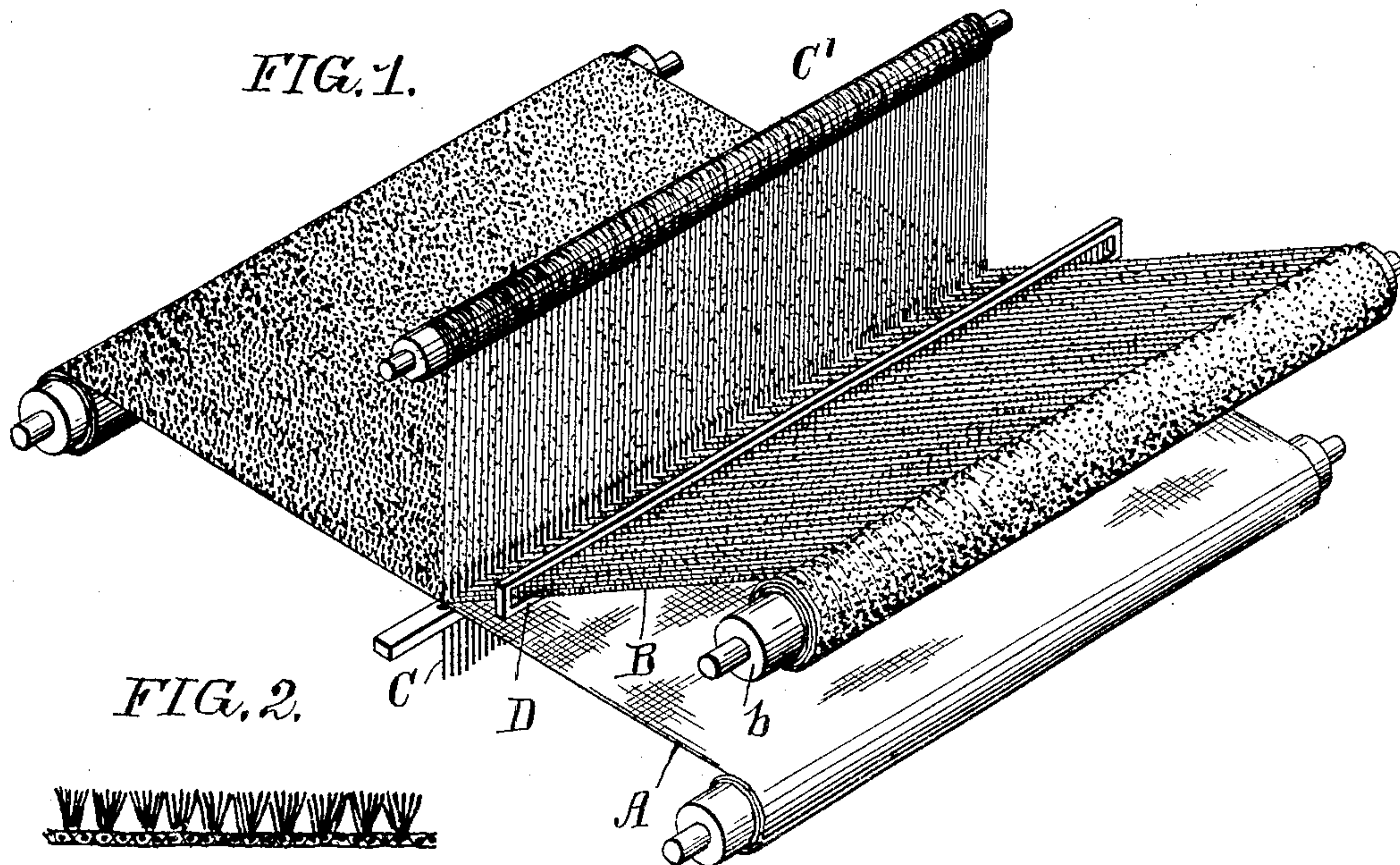


No. 803,990.

PATENTED NOV. 7, 1905.

E. CATTLOW.
PILE FABRIC.

APPLICATION FILED FEB. 24, 1902.



Witnesses:
George Donnelly.
Wm J. Donnelly

Inventor:
Edward Cattlow
By his Attorney
F. H. Witt Goodwin

UNITED STATES PATENT OFFICE.

EDWARD CATTLOW, OF PHILADELPHIA, PENNSYLVANIA.

PILE FABRIC.

No. 803,990.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed February 24, 1902. Serial No. 95,277.

To all whom it may concern:

Be it known that I, EDWARD CATTLOW, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Pile Fabrics, of which the following is a specification.

My invention relates to improvements in an article of manufacture known as "pile fabric," used for rugs and carpet, in which the amount of labor required in manufacturing the same is greatly reduced, and consequently so is the cost of manufacture. In my invention I use a backing of fabric, which may be of the width of the ordinary breadth of carpet, or it may be wider when making rugs, and I attach to the upper side of said backing a series of chenille threads, so that the free ends of the material used as the cross-threads in the chenille will stand perpendicular to the backing and form a fabric similar in appearance to the fabric known as "Axminster carpet." Said chenille threads form the design for the rug or carpet. It is also an object of my invention to make rugs of different designs with a shirr separating them, or to have a border of a different design which may be attached to the body of the rug.

In the manufacture of carpet or rugs at the present time the surface of the same is formed by threads which are woven or attached separately. This is a very slow process, as a great number of threads are required. In my invention the chenille threads are attached by directing each of said chenille threads to a pointed latch-needle, which latter may be placed very close together, as only a single thread is required to supply the needle, instead of the upper and lower threads, as required in a shuttle-machine where it is impossible to have the needles placed close together. By my invention the chenille threads are sewed to the backing simultaneously, said chenille threads first being set so that the design will be properly formed in the finished fabric.

Referring to the drawings, Figure 1 shows a perspective view of a carpet or rug illustrating my invention in course of manufacture and a portion of the apparatus used to facilitate said manufacture. Fig. 2 is a transverse sectional view of a portion of the complete fabric. Fig. 3 is a view of the chenille. Fig. 4 is a diagram demonstrating one method of weaving the chenille to form the pattern. Fig. 5 is a diagram of a rug, showing

the application of the above method. Fig. 6 is a diagram demonstrating a second method of weaving the chenille to form the pattern. Fig. 7 is a view of a rug in which the last-mentioned method is applied.

In the drawings, A represents a heavy fabric forming a backing for a rug, which may be of any desired width.

B represents the chenille, which is carried by a roll *b*, extending at right angles to the length of the backing A. A sufficient number of chenille threads are used so that when attached side by side they will extend across the entire width of the backing. Said chenille threads are placed sufficiently close together to form a surface similar to the Axminster carpet. One or more narrow breadths of the backing may be placed side by side in the machine when it is desired to make narrow widths of carpet. The chenille threads are attached to the backing by means of a row of pointed latch-needles C, a needle being provided for each chenille thread. Said needles are adapted to sew the chenille threads securely to the backing A. The stitches formed by the needles C run parallel with the chenille threads.

C' is a roller carrying threads to supply the latch-needles.

A very fine fabric can be made in the above way, as the needles C can be placed very close together. Either plain fabric or a fabric having a design can be produced.

The chenille threads are made, as shown in Fig. 3, with several warp-threads *b'* to hold the cross-threads *b''* after they are cut by the usual method. By using several threads *b'* the needles C have sufficient material to enter, and the thread from the needles will readily secure the chenille to the backing A, and the advantage in using several warp-threads *b'* is to hold said threads *b''* so that they cannot be pulled out.

A guide D is provided to direct the chenille threads to the proper needle and also to hold the cross-threads *b''* of the chenille in an upright position, forming a fabric such as that shown in Fig. 2. The guide D, used for directing the chenille thread to the needle C in the present instance, is simply a reed consisting of the upper and lower parallel bars and the cross-wires forming separate spaces for every chenille thread. In addition to this reed it is sometimes found desirable to use a conical guide for directing each thread to the needle. Round chenille threads may be used without

departing from my invention and are found desirable in manufacturing a cheaper grade of goods.

It will readily be seen that a rug or carpet can be made in a very short time compared with the time required by the old method, where the chenille is used as weft-threads running at right angles to the length of the fabric. The cost of manufacture is also greatly lessened, and a fabric is produced which is very durable, as the short threads in the chenille are securely held to the backing of the fabric. The chenille threads are made so that the pattern in the finished fabric will be formed by placing the chenille threads parallel with the length of the strip of carpet, similar to warp-threads, instead of weft-threads as they are used at the present time.

Fig. 4 represents the chenille cloth before it is cut into chenille threads. b' represents the warp-threads, and b^2 the weft-threads. The dark lines represent the colors to form the pattern. The section of chenille cloth (marked E) when cut longitudinally between the warp-threads b' will form the first chenille thread for as many rugs or repeats of the pattern as there are warp-threads b' in the chenille cloth. The section marked E' when cut will form the second chenille thread, the third section forming the third chenille thread, and so on until a sufficient number are woven to complete the width of the pattern.

Fig. 5 shows the chenille thread formed into a rug or carpet. Thread 1 1 represents the first chenille thread; 2 2, the second thread; 3 3, the third thread, and so on across the width of the pattern. The chenille threads forming the pattern are set when they are placed on the roll b so that the chenille threads will match and form the desired pattern when attached to the backing.

It has been found to be undesirable to make a great number of rugs of the same pattern. The chenille cloth when cut parallel with the warp-threads b' will make, for instance, one hundred threads, which will form one thread in each of one hundred rugs, which will all be of the same pattern. In the method above described section E, Fig. 4, would form the first thread of one hundred rugs, and to avoid cutting the chenille at the shirr e between the sections, which would necessitate the handling of short pieces of chenille, I have devised a second method of weaving the chenille, which is illustrated in Fig. 6. Section F represents the chenille cloth of sufficient length to form when cut the first chenille thread of one design, section F' forms the first chenille thread of a rug of a second design, and section F^2 forms the first chenille thread of a rug of the third design, and so on until a chenille thread is made of sufficient length to be handled to an advantage, allowing enough material for several rugs to be

placed on the machine at one time. The second and succeeding threads to form the width of the pattern are made in a similar way. If the chenille cloth were woven with a large number of sections of the same pattern, too great a number of rugs of similar design would be produced. The advantage of this second method will therefore be seen. I can produce rugs of different patterns with every section of the chenille cloth and at the same time have the chenille threads of sufficient length to place enough material in the machine so that it can be operated to an advantage.

It has been found desirable to change the design of the border of rugs without changing the design of the body. I can readily do this in the following manner: The chenille cloth is woven, as illustrated in Fig. 4, in which the different sections E E' E^2 , &c., will form when cut chenille threads Nos. 1, 2, 3, &c., of the same rug. These chenille threads are cut at the shirr e and placed side by side to form the body of the rug. The chenille threads to form the border are made in a similar way, and when cut at the shirr the ends are attached to the ends of the chenille threads forming the body of the rug. Fig. 7 illustrates a rug with the border attached. The lines forming the inner square indicate the body of the rug, which is joined to the border at the inner top and bottom lines by tying the ends of the chenille threads of the body and of the border. The side lines indicate the different patterns in the chenille threads, which are sewed to the backing. The borders of rugs can be readily changed in this way and very neat work can be done, as the chenille threads can be attached so that when the rug is finished the connection between the border and the body of the rug cannot be noticed.

It is sometimes found desirable to weave the chenille for the end borders for a rug in series and attach them to the backing, which backing is afterward cut and sewed to the backing of the body of a rug, and the ends of the chenille threads of the border and body of the rug are then tied together, making a very advantageous way of making rugs so that the borders may be changed.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a fabric, the combination of a backing, continuous chenille threads attached to said backing parallel to the length of the backing, said chenille threads forming the design for a rug, a shirr formed in said chenille threads to separate the different rugs substantially as described.

2. In a fabric, the combination of a backing, continuous chenille threads attached to said backing parallel to the length of the backing, said chenille threads forming designs for different rugs, and a shirr formed

in said chenille threads to separate the different rugs substantially as described.

3. In a fabric, the combination of a backing, chenille threads attached to said backing parallel with the length of the same, said chenille threads forming the design for a rug, a shirr formed at the ends of the design in said chenille threads, chenille threads forming a design for a border, said border being attached to the body of the rug by sewing the backing of the body and border together substantially as described.

4. In a fabric, the combination of a backing, chenille threads attached to said back-

ing parallel with the length of the same, said chenille threads forming the design for the body of the rug, chenille threads attached to a backing forming a different design for a border of a rug, and a shirr formed at the ends of the chenille threads of the body and border, and the same attached by tying substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

EDWARD CATTLOW.

Witnesses:

WILLIAM BUCKLEY,
JOSEPH CATTLOW.