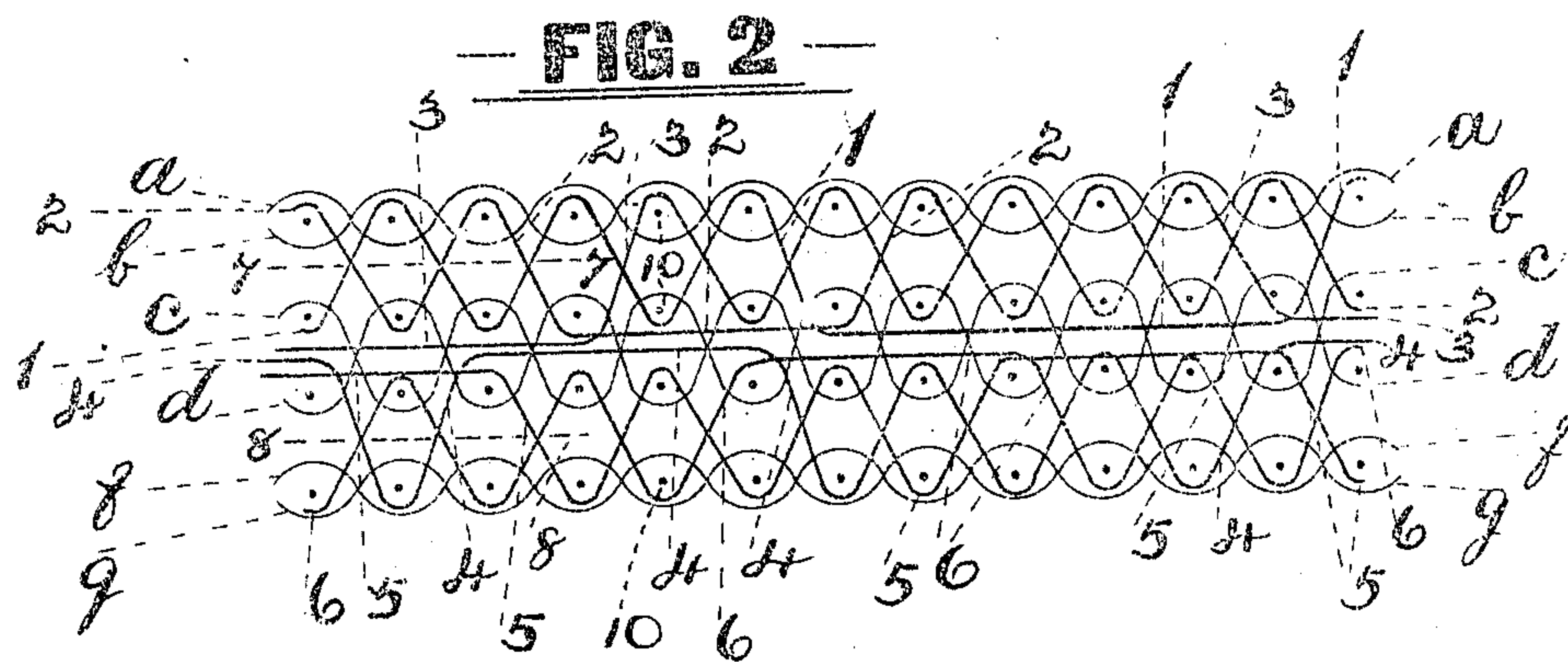
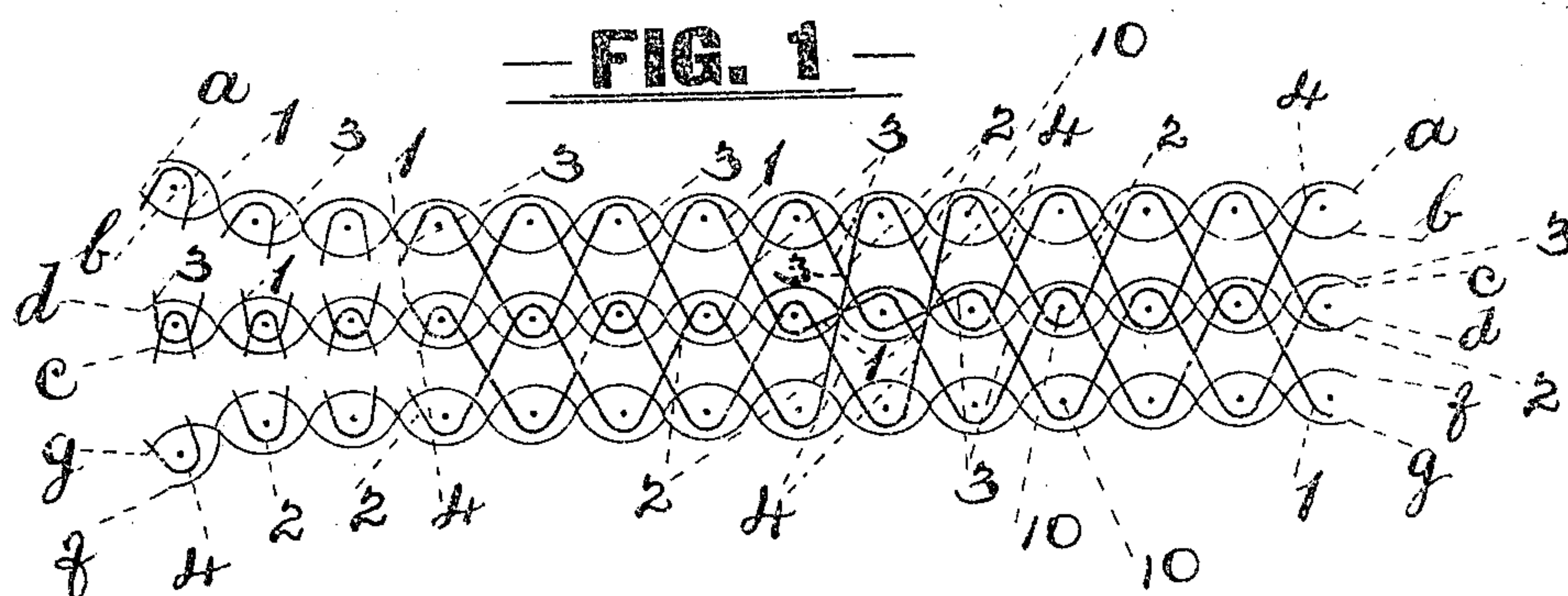


J. C. BROOKS.
 TEXTILE FABRIC.
 APPLICATION FILED APR. 8, 1907.

944,125

Patented Dec. 21, 1909.
 2 SHEETS—SHEET 1.



Witnesses.
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 John C. Brooks

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2 SHEETS—SHEET 2.

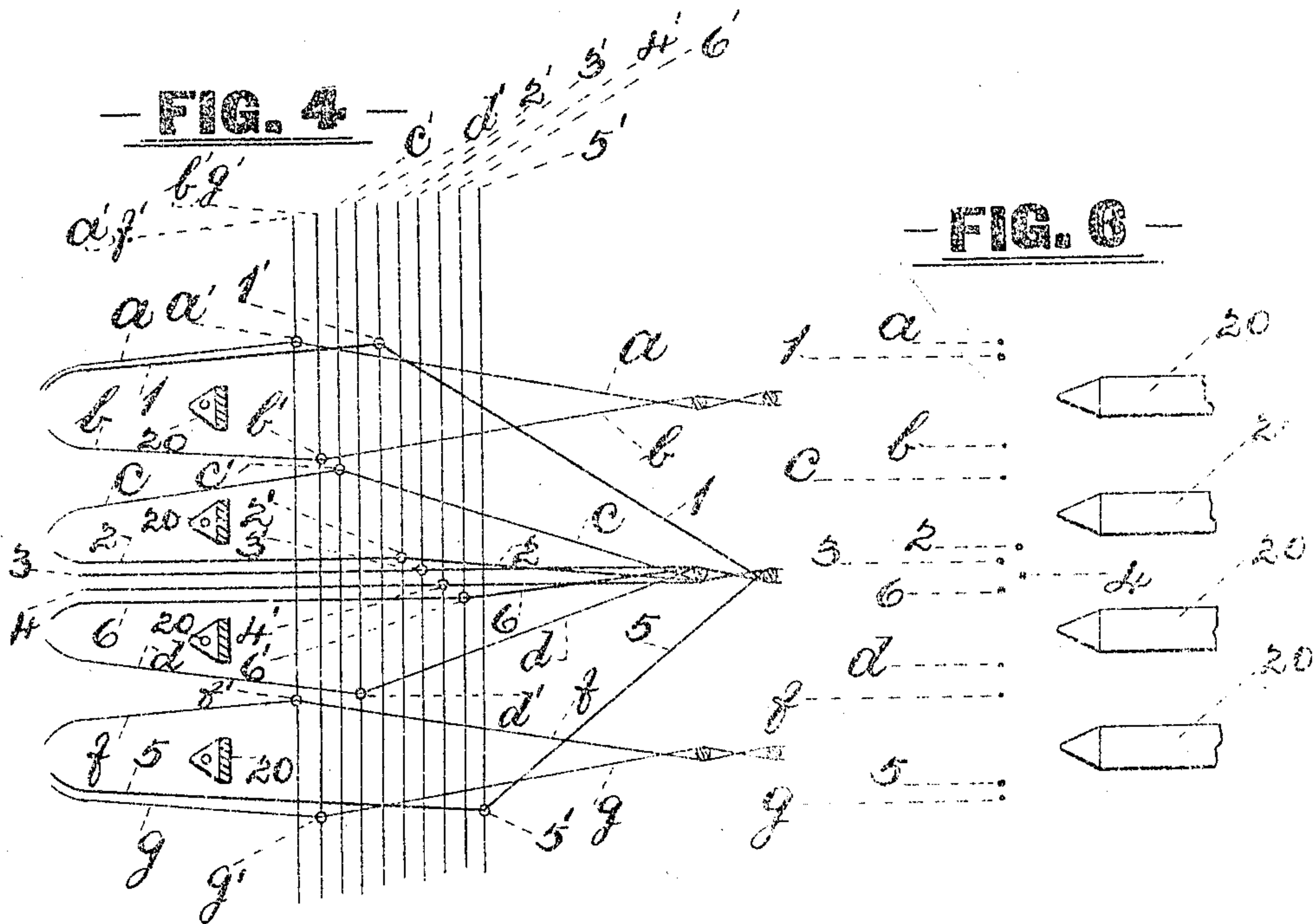
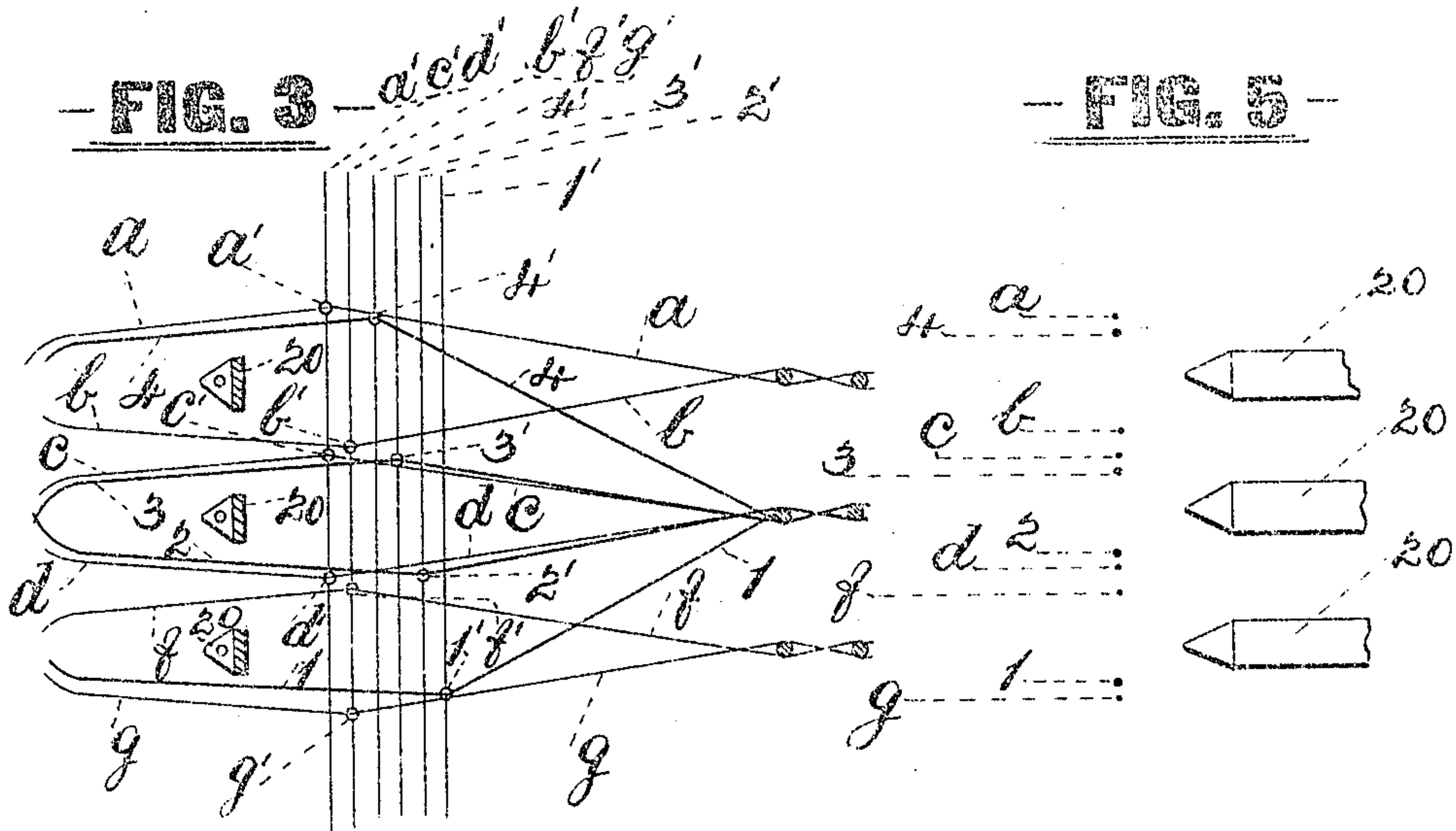
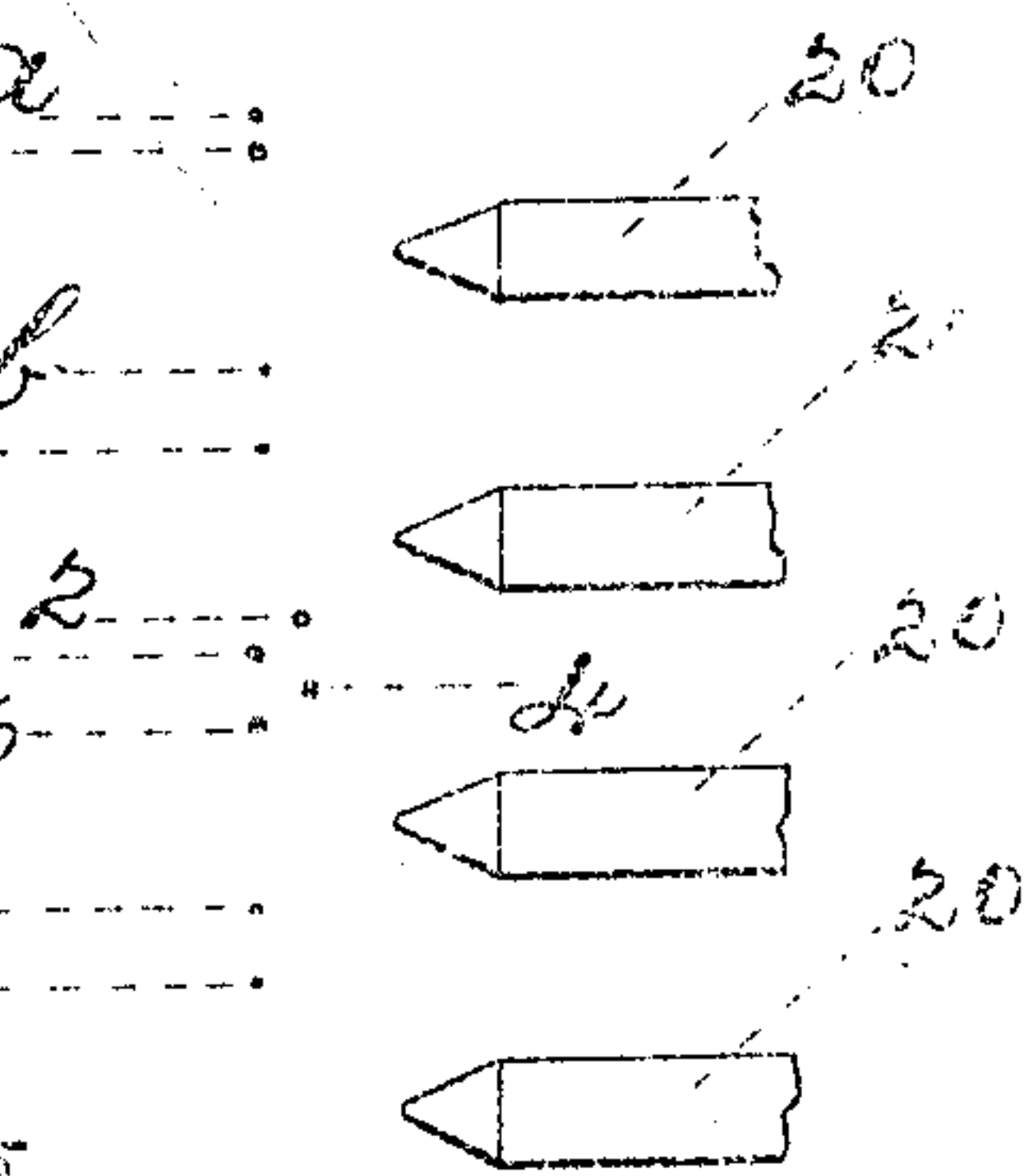


FIG. 5



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN C. BROOKS, OF PATERSON, NEW JERSEY.

TEXTILE FABRIC.

944,125.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed April 6, 1907. Serial No. 386,749.

To all whom it may concern:

Be it known that I, JOHN C. BROOKS, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in the Manufacture of Textile Fabrics, of which the following is a specification.

My invention relates to the manufacture of multiple textile fabrics in which it is desired to form several plies, to produce a good body in the fabrics, or to cut apart, to produce several fabrics having pile surfaces on one or both faces. And the object of my invention is to use such a method, or process in the weaving of such fabrics, so as to produce them in an economical manner.

The method in vogue, to weave pile fabrics, has hitherto been limited to the insertion of two separate picks, simultaneously, in two separate warp sheds, and has been accomplished by throwing two shuttles, one traveling upon the lay, the other traveling upon the bottom warp threads of the top fabric. The use of a needle, to insert weft, being confined to one warp shed formation only. In so called fabric blanks, the warp sheds have been opened in succession, requiring as many separate picks of weft as there are plies. In other fabrics the pile being formed by tufting needles, separately or unitedly actuated.

In my improved method, or process, I form all warp sheds simultaneously, and simultaneously insert picks of weft in each shed by using a plurality of weft needles.

My invention accordingly consists in simultaneously forming several warp sheds, one above the other, and simultaneously, inserting in such warp sheds, picks of weft, by means of needles, carried one above the other, the so woven fabrics being afterward cut apart. And my invention further consists in using such a method, that it is possible to carry a supply of pile forming, or figuring, warp threads, which when not used therefor, acts as stuffers for the desired principal fabric.

In the drawing, Figure 1 represents, in an exaggerated form, a 3-ply fabric, which when cut apart, forms two, single pile faced fabrics, and one double faced pile fabric, woven by my method. Fig. 2, is a similar representation, but showing the additional feature of using four warp sheds and carrying a supply of selectable warp threads within

the middle ply. Fig. 3, illustrates the forming of the three warp sheds for the last picks of weft shown in Fig. 1. Fig. 4, illustrates the formation of the warp sheds for the last picks of weft shown in Fig. 2. Fig. 5, is a front view of warp sheds, and weft inserting needles, shown in Fig. 3. Fig. 6, is a similar view of warp sheds, and needles, shown in Fig. 4.

Referring to Fig. 1, the fabric, and Fig. 3, its process of formation, *a, b, c, d, f*, and *g*, are binding warp threads, and are passed through heddle eyes, *a', b', c', d', f'*, and *g'* respectively, and are raised, and lowered, to form sheds; and the pile forming, or figuring, warp threads 1, 2, 3, and 4, pass through heddle eyes, 1', 2', 3' and 4', and are moved so as to be lifted, half way to be bound with center ply, or full height to be bound in the top ply.

Referring to Fig. 2, fabric, and Fig. 4, process of its formation, the binding warp threads *a, b, c, d, f* and *g*, pass through heddles, *a', b', c', d', f'* and *g'*, heddles, *c'* and *d'*, moving double the distance of heddles *a', b', f'* and *g'*, so as to allow for the inserting of separate picks of weft above and below the pile forming, or figuring warp threads carried in the middle ply, the said threads pass through their respective heddles, thus, threads 1, 2, and 3 pass through heddles 1', 2', and 3', and are raised, to be bound, or show, in the upper ply; the threads 4, 5, and 6, pass through heddles 4', 5' and 6', and are lowered to be bound, or show, in the bottom ply. The weft inserting needles, 20, are arranged one above the other, and simultaneously inserted within their respective warp sheds.

From the foregoing it will be apparent, that the pile, or ply, warp threads, can be caused to show upon the upper or lower face, of the compound fabric, or hid away within the center ply; thus producing a single, solid, ornamented fabric; or the said warp threads, can be bound into the different plies, forming fabric blanks, and afterward split or cut apart.

While I show 3 and 4 needles, and warp sheds, it is obvious, a greater, or less, number can be used, without departing from the spirit of my invention.

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

1. The process of producing textile fabrics which consists in separating binding

warp threads into three separate sheds, one above the other, binding together the said sheds with pattern forming warp threads in any definite order or succession, and simultaneously inserting within each warp shed picks of weft.

2. The method of producing fabric blanks adapted to be cut apart to form pile fabrics, which consists of forming three or more binding warp sheds, one above the other, carrying pile forming warp threads within the center binding warp sheds, carrying, raising or lowering said thread to interweave with the said binding warp sheds and inserting simultaneously weft threads within each separate warp shed to bind together the said warp threads in any definite order or succession.

3. The method of producing fabrics, which consists in dividing the warp into substantially four parts; three to constitute the binding warp threads the other the pile or pattern forming threads, reeding the successive binding warp-threads into successive harnesses according to the structure of the fabric, reeding the remaining or pile-warp threads successively into as many harnesses as required for a pattern being woven; separating the binding-warp threads to form three separate warp-sheds; separating the

pile-warp threads to mingle with the binding-warp threads; simultaneously inserting a pick of weft within each warp-shed; then closing and crossing the binding-warp threads to form new sheds, changing the pile warp threads to mingle with a different binding warp-shed, again inserting simultaneously in each of said sheds picks of weft; repeating the foregoing in any definite order or succession necessary to produce the desired fabric.

4. The process of producing textile fabrics which consists in simultaneously forming three or more warp sheds, one above the other, carrying a supply of pile forming warp threads within the center of the center warp sheds, selecting threads from said supply and interweaving them between the center and higher warp sheds and between the center and lower warp sheds, and binding the interweaving warp threads together with weft threads simultaneously inserted within the several warp sheds.

In testimony I affix my signature in the presence of two attesting witnesses.

JOHN C. BROOKS.

Witnesses:

BEULAH LOCKWOOD,
FRED T. KENNEDY.