

No. 756,215.

PATENTED APR. 5, 1904.

G. S. COX.

WOVEN INTERLINING FOR SKIRTS.

APPLICATION FILED JUNE 29, 1903.

NO MODEL.

FIG. 1.

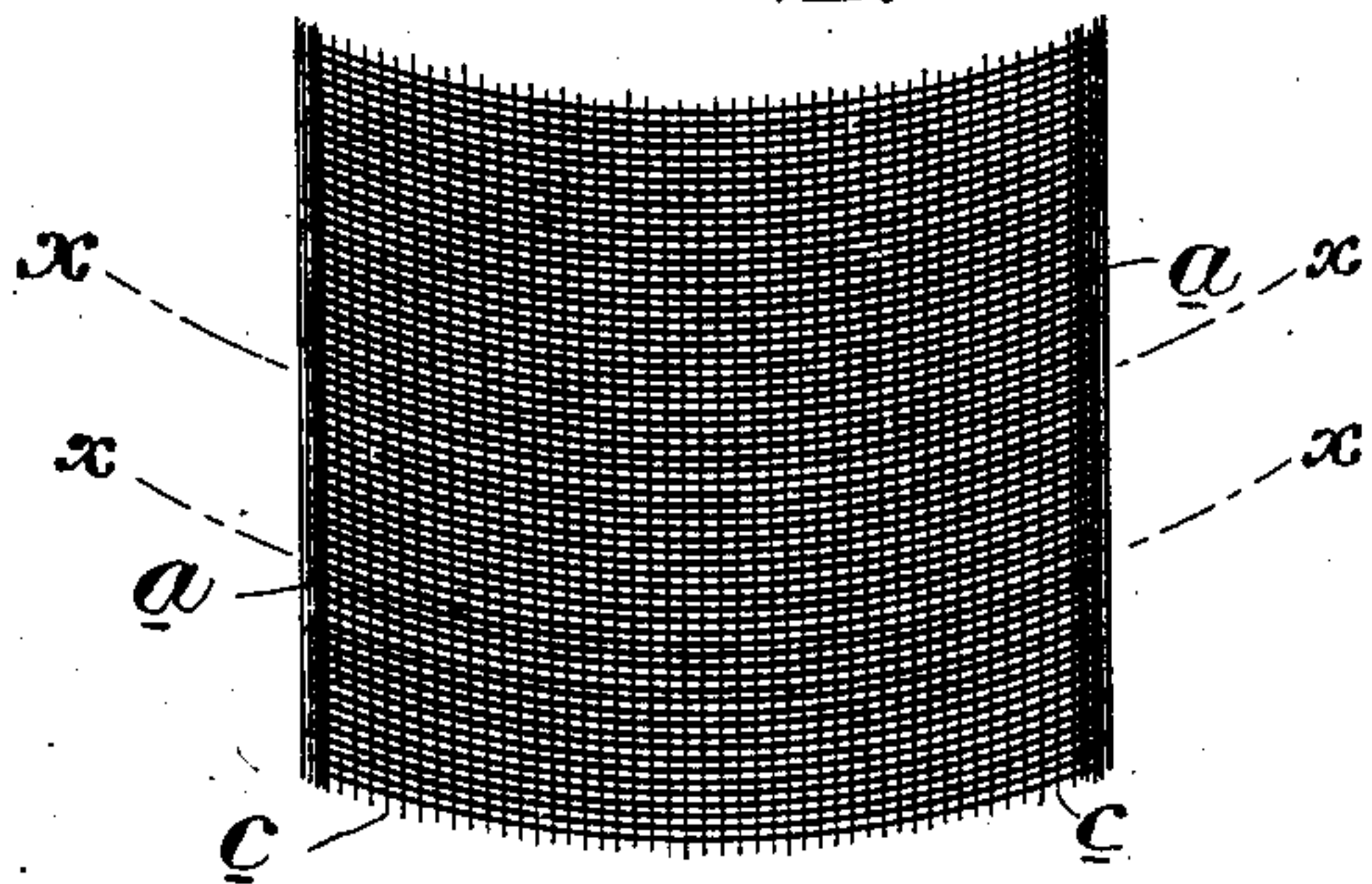


FIG. 2.

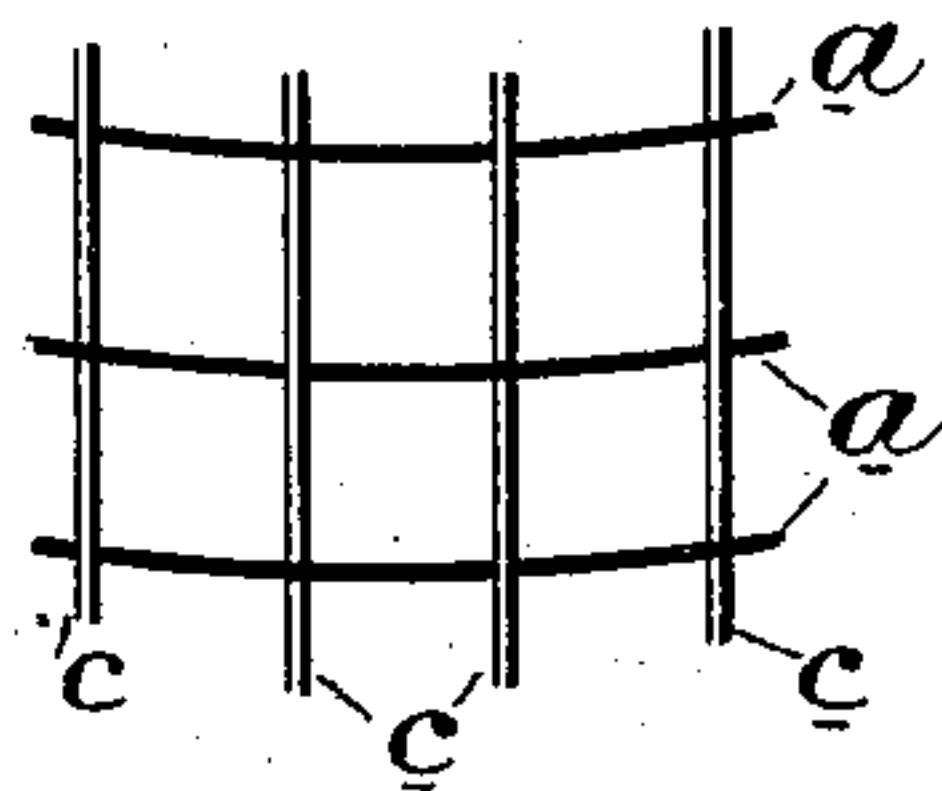


FIG. 3.

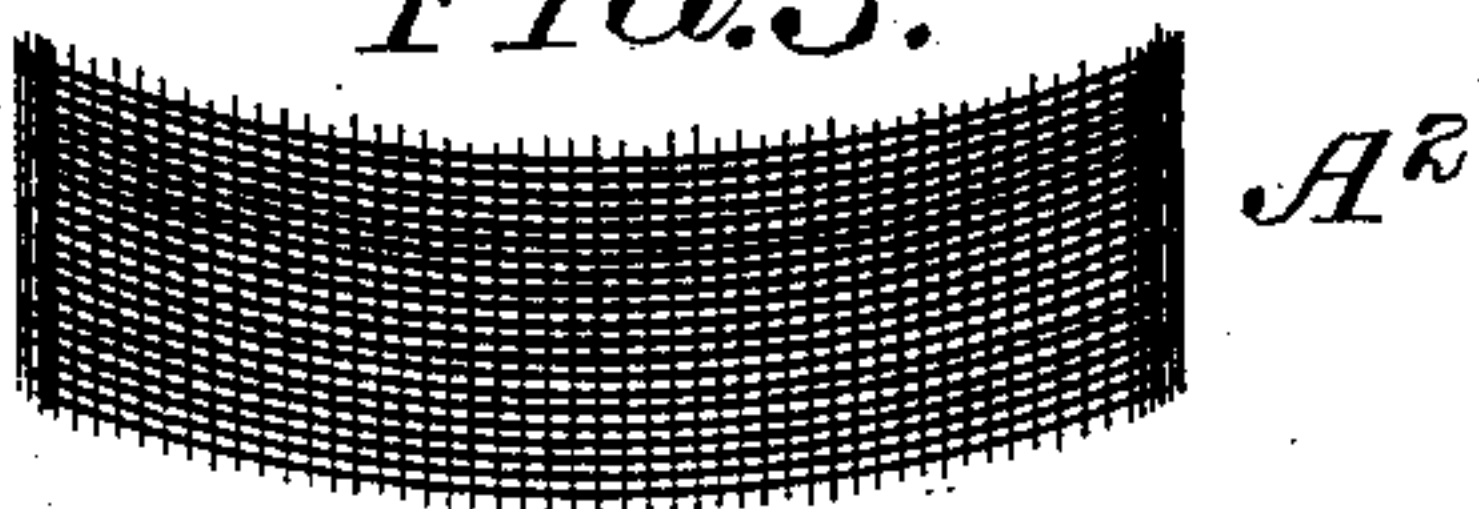


FIG. 5.

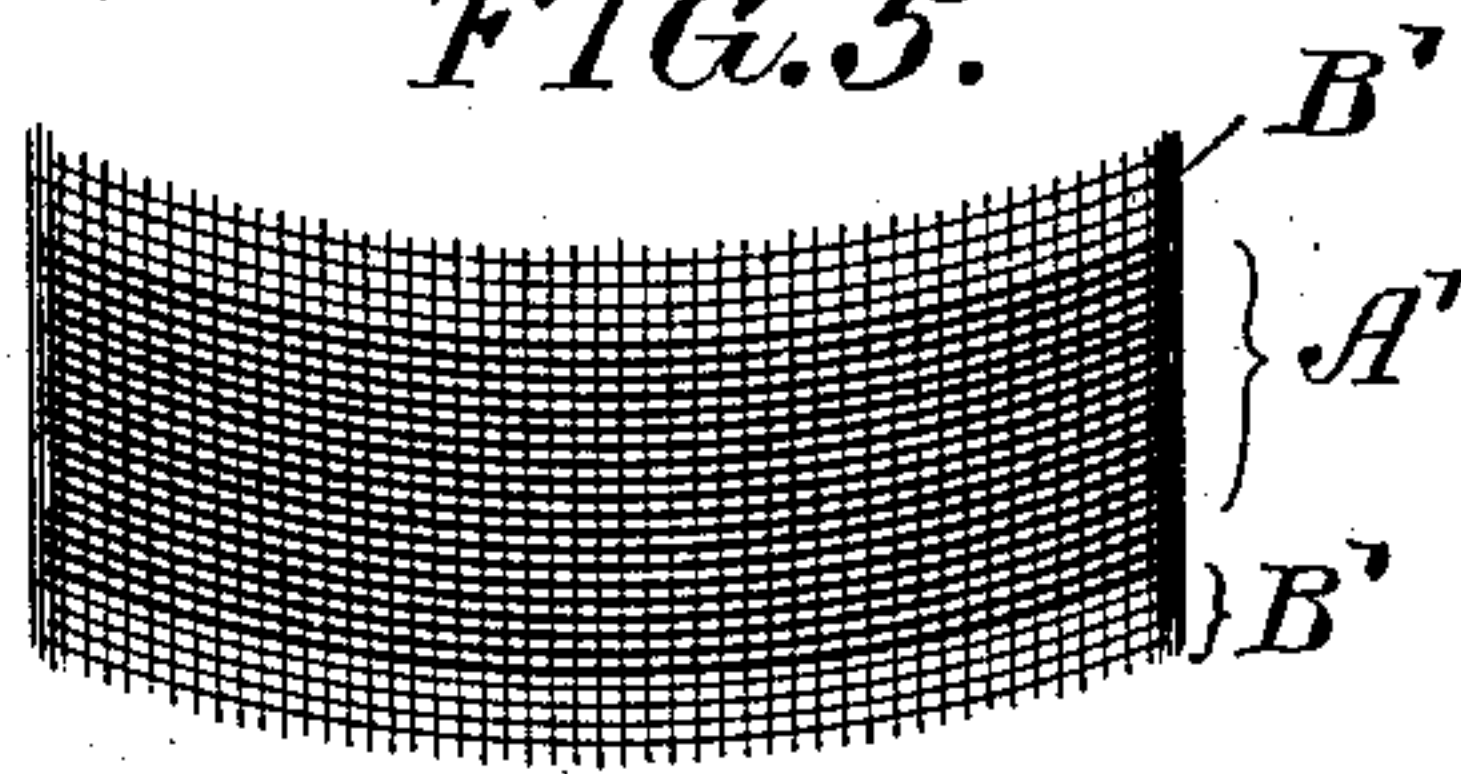


FIG. 4.

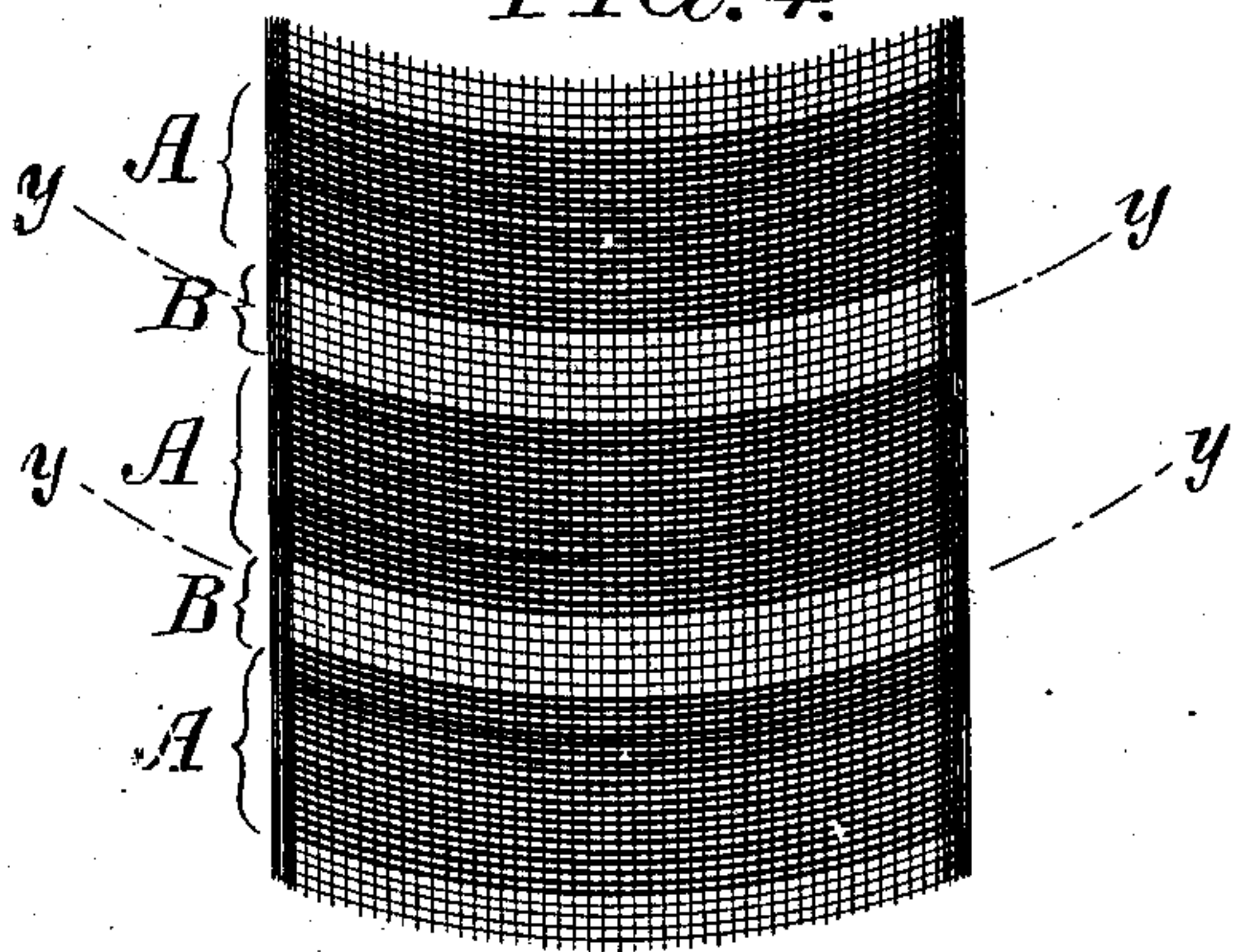


FIG. 6.

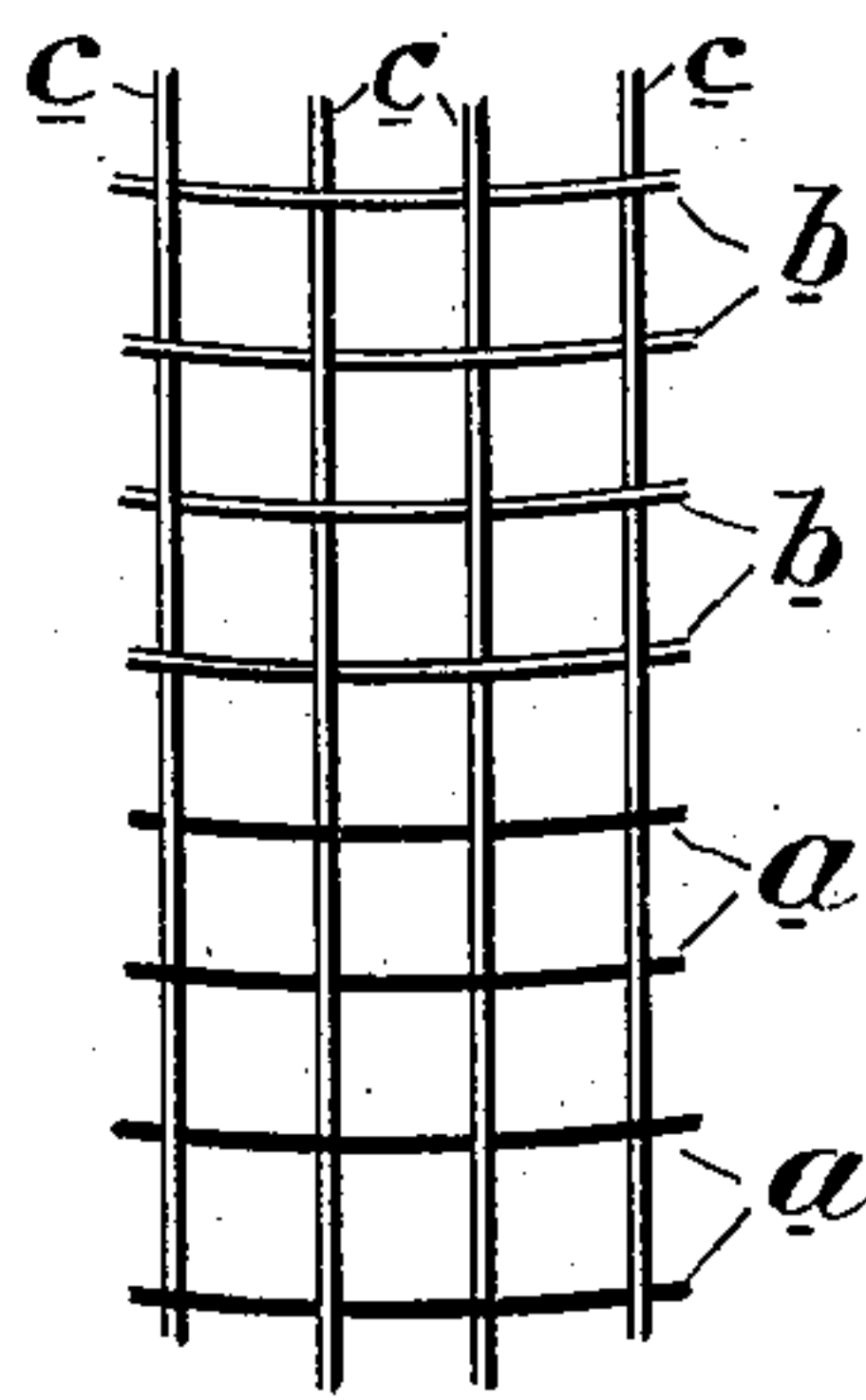
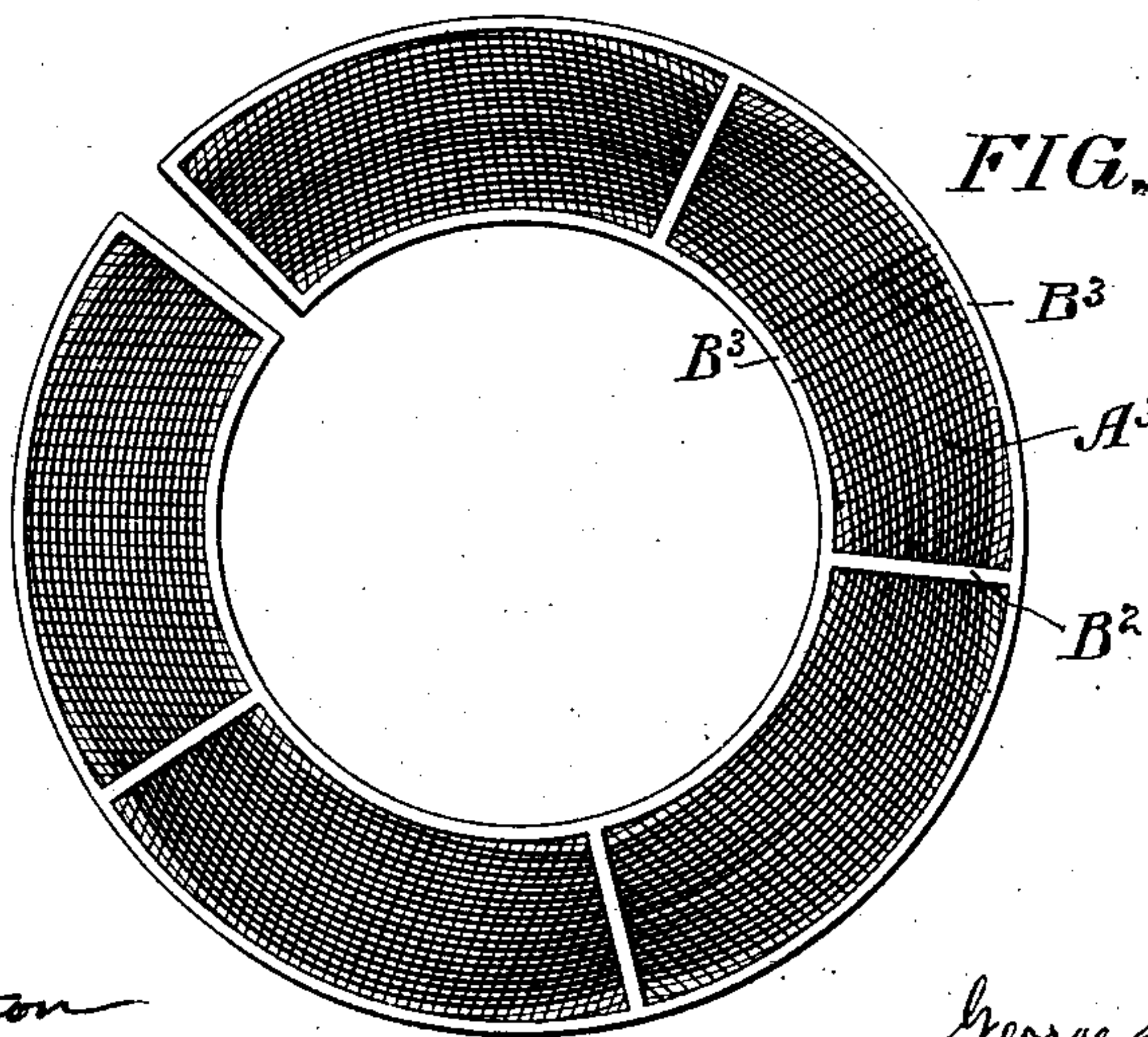


FIG. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE S. COX, OF FITZWATERTOWN, PENNSYLVANIA, ASSIGNOR TO HIMSELF, AND WALTER S. COX, TRADING AS GEORGE S. COX AND BROTHER, OF PHILADELPHIA, PENNSYLVANIA.

WOVEN INTERLINING FOR SKIRTS.

SPECIFICATION forming part of Letters Patent No. 756,215, dated April 5, 1904.

Application filed June 29, 1903. Serial No. 163,489. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE S. COX, a citizen of the United States, residing at Fitzwattertown, county of Montgomery, and State of Pennsylvania, have invented a new and useful Improvement in Woven Interlining for Skirts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to interlining for skirts—that is, the facing or stiffening interposed between the cloth and the lining at the lower edge of the dress. This interlining is used for the purpose of stiffening the dress at this point, preventing it from hanging in loose folds, and causing it to assume a semirigid condition. These interlinings are usually made of a fabric in which cotton forms the warp and horsehair the weft. In applying it to the garment it is necessary, owing to the outward flare given to the lower part of the dress, to have its upper and lower edges curved. To so form the interlining, the fabric must be cut across and at an oblique angle to the weft. The result is that the stiff hairs protrude along the upper and lower edges of the pieces of interlining. The constant friction of these rough and cutting edges with the dress and lining causes them to wear away rapidly. The condition is only partly remedied by sewing strips of protecting fabric along these rough and cutting edges. It is not feasible to hem the edges owing to the stiff and resisting character of the horsehair.

In a patent issued to Walter S. Cox, No. 726,648, dated April 28, 1903, the foregoing defects are cured without substantially interfering with the stiffening quality of the interlining by means of a fabric produced by interweaving a continuous warp of cotton with alternate sections of linen and horsehair weft, thereby forming a section of pliable fabric on each side of a section of stiff fabric, the pliable fabric being adapted to be cut on curved lines, thereby forming a piece of interlining whose central portion is composed of the

usual stiff interwoven cotton and horsehair, while the edges are formed of interwoven cotton and linen that may be readily hemmed before being secured in place. This produces a fabric having a main or body portion of stiff weave that properly affects the conformation of the garment and having end portions of flexible material having no protruding stiff fibers to cut and wear away the garment.

An interlining fabric constructed in accordance with this patent obviates the defects of the old interlining; but it will be understood that it is inadvisable to make such an interlining fabric of the usual width. The reason for this is that as the flexible section is cut on curved lines the greater the width of the fabric as a whole the greater must be the length of the flexible section, and it will also be understood that the ratio of increase in the required length of the flexible section is greater than the ratio of increase in the width of the fabric as a whole. The consequence is that with a wide fabric the length of a flexible section is greater than is desirable, causing waste of material and causing a too great width of flexible fabric along the lower edge of the cut interlining. While these disadvantages are obviated or at least minimized by forming the fabric of substantially less than the usual width, still it is desirable that the fabric should be of the width to which the trade is accustomed.

The object of my invention is to produce a fabric that may either be composed entirely of stiff fabric or that may be formed of alternate sections of stiff and flexible fabric, as in the said Cox patent, No. 726,648, and that may be of the usual or any desired width and that will be open to none of the objections hereinbefore enumerated as characteristic of the ordinary interlining fabric.

My invention consists of a woven interlining fabric having the usual warp and a weft composed either entirely of horsehair or other stiff material or composed of sections of stiff and flexible material, as in the said Cox patent, No. 726,648, the weft extending in curved

lines or at an oblique angle to the warp or in a direction substantially parallel to the direction in which the fabric is cut to form the interlining.

5 In the drawings, Figure 1 represents a length of fabric, showing one form of my invention. Fig. 2 is an enlarged view of a portion of the fabric shown in Fig. 1. Fig. 3 represents a piece of interlining cut from the fabric of Fig. 1. Fig. 4 represents a length of fabric, showing the fabric of the Patent No. 726,648 modified to embody my invention. Fig. 5 represents a piece of interlining cut from the fabric of Fig. 4. Fig. 6 is an enlarged view of a portion of the fabric shown in Fig. 4. Fig. 7 is a view of a complete interlining for a dress formed by securing together a number of pieces of interlining embodying my invention.

20 In Figs. 1 and 2, *c* represents the cotton warp, and *a* the stiff horsehair weft, the latter being curved on lines approximately coincident or parallel with the lines on which the fabric must be cut to form the interlining. 25 The fabric is woven in the usual way; but in the finishing operation the fabric is put through any appropriate process that will bend or curve the weft into the form shown. I prefer to so effect this result by passing the 30 fabric while under tension over a roller or rollers whose periphery in longitudinal cross-section is in the shape of a segment of a circle—that is, whose diameter gradually decreases from its center toward its ends, so that 35 the longitudinal center of the fabric travels more rapidly over the roller than its edges and the portions of the fabric between its center and edges travel at intermediate speeds.

In Fig. 4 and 5 I have shown the invention 40 applied to the compound fabric of the Cox patent, No. 726,648. *c* represents the cotton warp, *a* the stiff horsehair weft, and *b* the linen weft, forming alternate stiff sections A (of interwoven cotton and horsehair) and flexible 45 sections B, (of interwoven cotton and linen.)

x x represent the lines on which the fabric of Figs. 1 and 2 is cut, thereby forming pieces of curved interlining, as shown at A², Fig. 3. The line of cutting extends parallel with the 50 weft, and therefore at no point intersects any strands of horsehair, so that the piece of interlining has no protruding stiff hairs along its edges.

y y represent the lines on which the compound fabric of Figs. 4 and 6 is cut, thereby forming pieces of interlining as shown in Fig. 5. The line of cutting is through the flexible section and parallel, or nearly so, with the weft, thereby forming a piece of interlining composed of a curved stiff main or body portion 60 A' and curved flexible edge portions B' B' of uniform width and just sufficiently wide to enable the piece to be hemmed, thus leaving

the entire body of the finished piece of interlining composed of the usual stiff interwoven 65 linen and horsehair.

In Fig. 7 I have illustrated one way in which a number of the separate pieces of interlining shown in Fig. 3 or Fig. 5 may be hemmed and secured together to form a complete interlining 70 for the lower edge of a dress. A³ represents the body of stiff interwoven cotton and horsehair, B³ the upper and lower hemmed edges, and B² the strip of fabric uniting the side edges of the separate pieces. If the separate 75 pieces are formed as shown in Fig. 5, the hems B³ are composed of the flexible sections B' of the compound fabric therein shown. If the separate pieces are formed as shown in Fig. 3, separate strips of fabric are used for hemming. In either case separate strips of fabric are used to form the joining-strips B². 80

It is not essential that the materials specified herein should be employed. For the horsehair may be substituted some other animal fiber or a stiff vegetable fiber or a vegetable fiber that has been stiffened by an artificial process. For the cotton may be substituted any suitable flexible warp. For the linen may be substituted any suitable weft. 90

While I have set forth a specific fabric in which the warp is formed of flexible strands and the weft of stiff strands, I do not desire to limit myself to such a weave, as it is obvious that the principle of my invention may be 95 embodied in fabrics regardless of whether the stiff strands constitute the warp or the weft.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is— 100

1. As a new article of manufacture, a woven interlining fabric having the weft extending in curved lines.

2. As a new article of manufacture, a woven interlining fabric whose weft-threads are 105 curved in a direction substantially parallel with the direction in which the fabric is cut to form an interlining.

3. As a new article of manufacture, a woven interlining fabric having a warp of any suitable material, and a weft of stiff material, as horsehair, the warp extending in straight lines and the weft in curved lines. 110

4. As a new article of manufacture, a woven interlining fabric having a warp of pliable material and alternate sections of pliable and stiff weft, the weft of both sections lying in parallel curved lines. 115

In testimony of which invention I have hereunto set my hand, at Philadelphia, Pennsylvania, on this 18th day of June, 1903. 120

GEORGE S. COX.

Witnesses:

FRANK S. BUSSEY,
M. F. ELLIS.