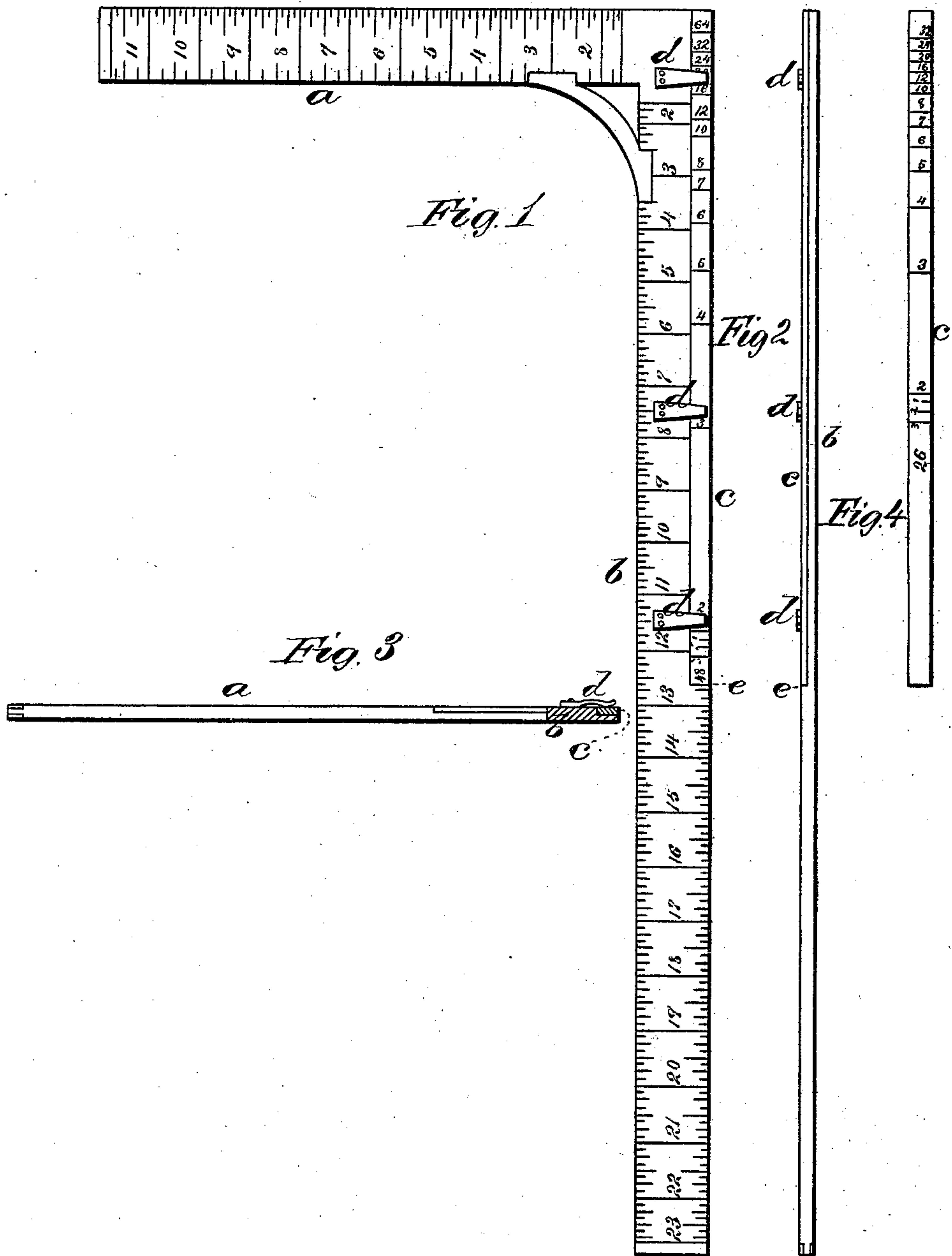


J. H. NICHOLS.

METHOD AND APPARATUS FOR LAYING OUT COAT PATTERNS.
No. 179,046.

Patented June 20, 1876.



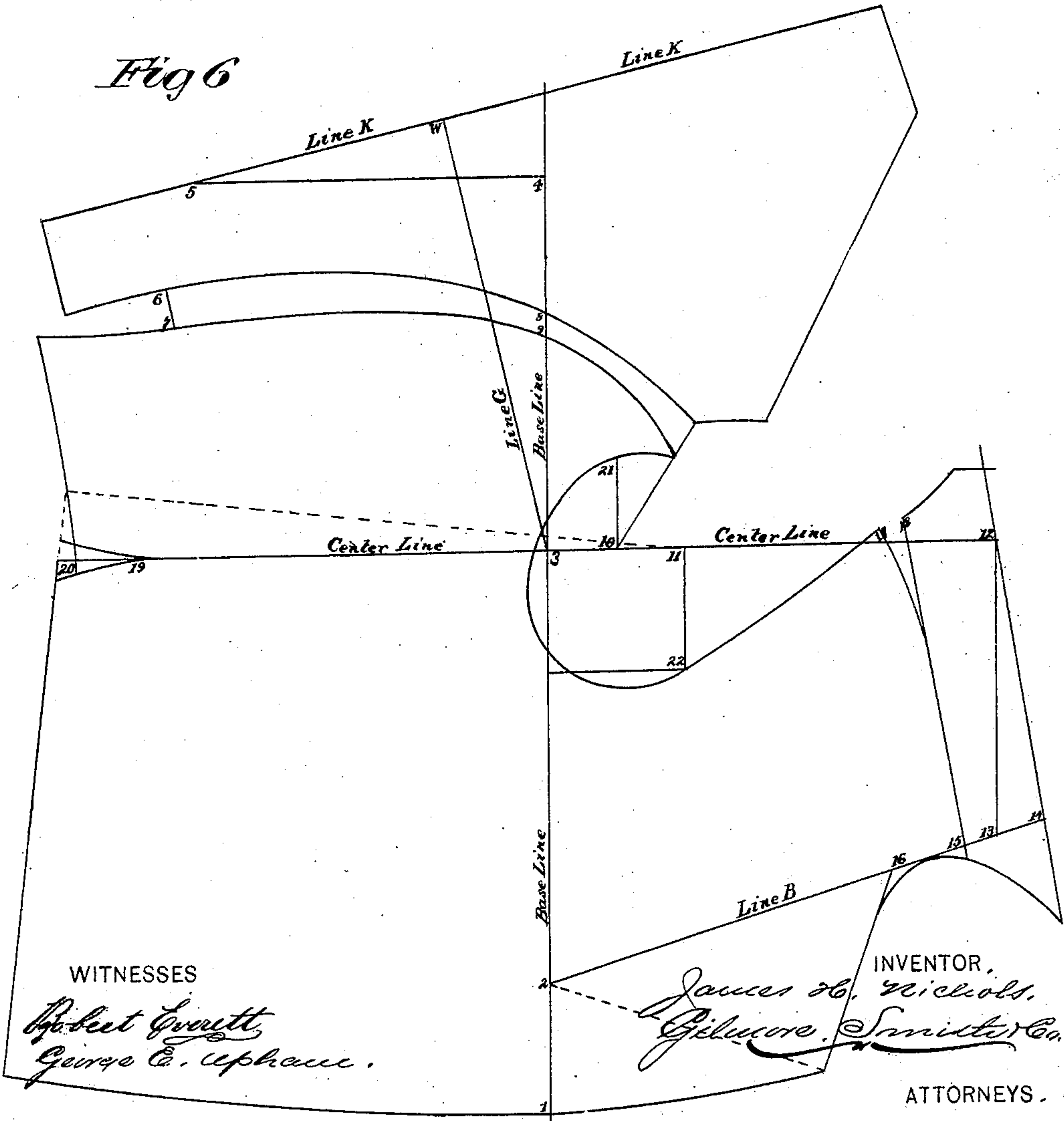
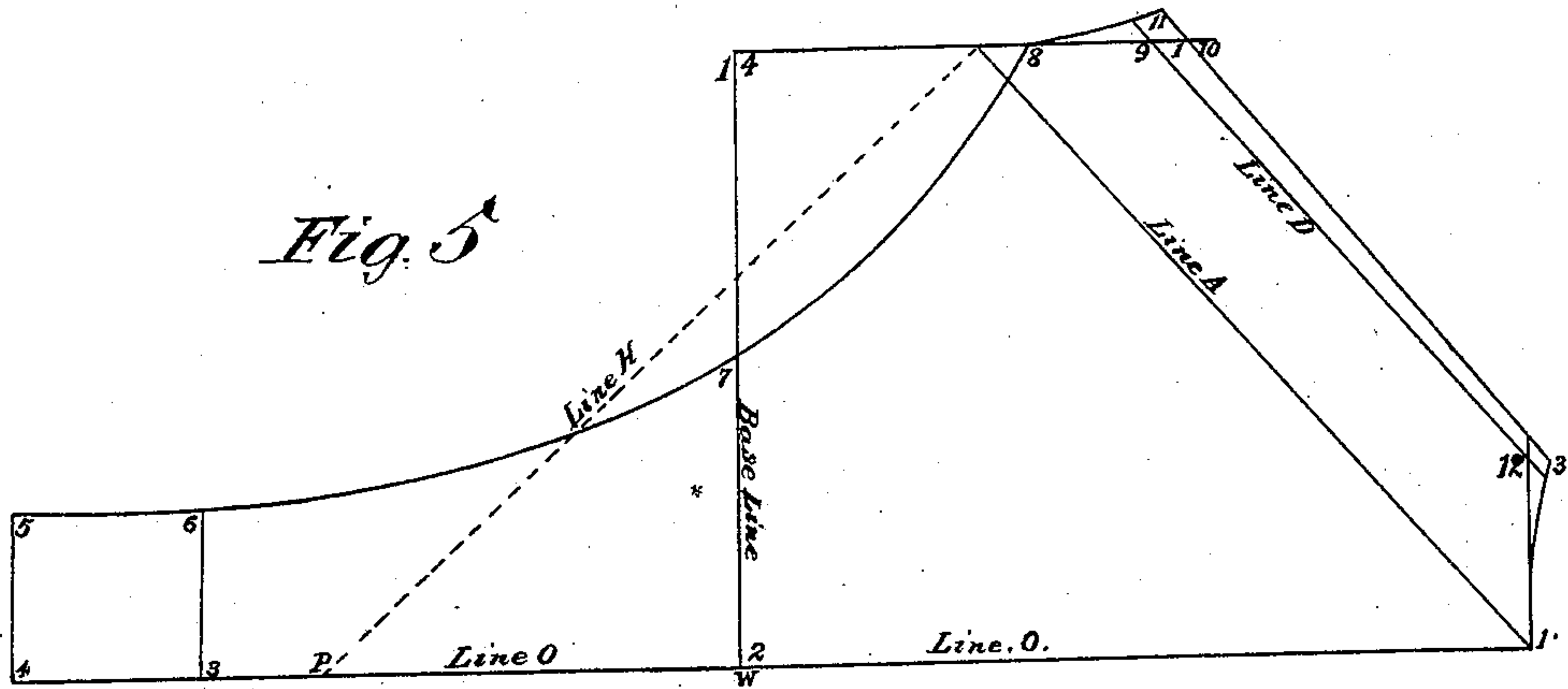
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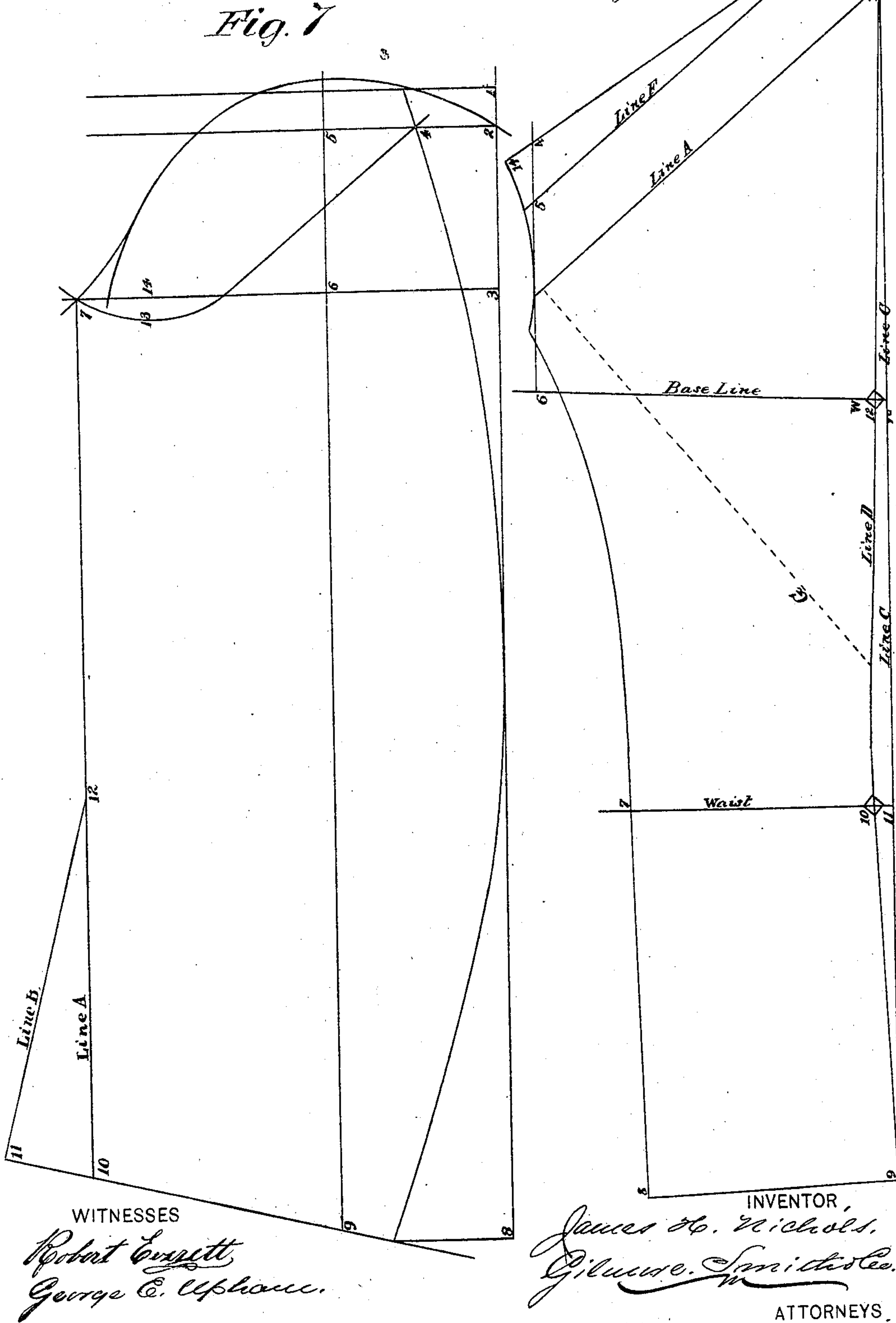
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Fig. 8



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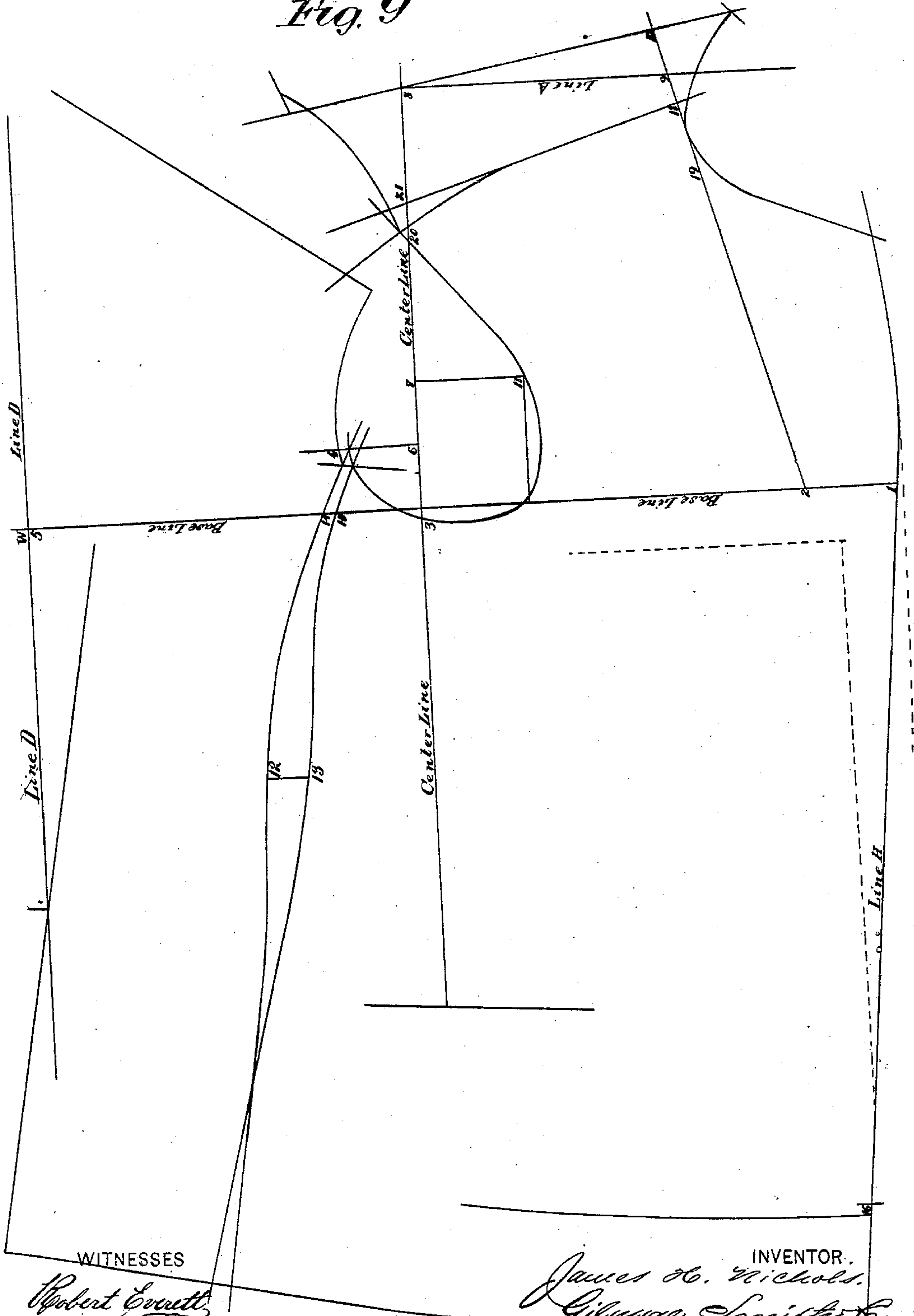
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Fig. 9



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IMPROVEMENT IN METHODS AND APPARATUS FOR LAYING OUT COAT-PATTERNS.

Specification forming part of Letters Patent No. **179,046**, dated June 20, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, JAMES H. NICHOLS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and valuable Improvement in Tailors' Squares and Diagrams; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of front elevation of my tailor's square, and Fig. 2 is an edge view of the same. Fig. 3 is a transverse vertical section of my square, and Fig. 4 is detachable strip for the same. Figs. 5, 6, and 7 are diagrams for a frock-coat; and Figs. 8 and 9 are diagrams for a sack-coat.

This invention has relation to a new and improved method or system of laying out coats for cutting, whereby the drafting of the different sizes can be executed with great facility; at the same time greater accuracy is obtained in measurements and fitting, as will be hereinafter explained.

In the annexed drawings, Figs. 1, 2, and 3, I have represented a tailor's square having the two limbs *a* and *b* at right angles to each other, marked off in inches and fractions of inches, in the usual well-known manner, *c* designating a scale-strip, which is removable, and held in place by means of spring-fingers *d*. I employ a number of these scale-strips, differently graduated, according to the different sizes of coats to be cut, and I prefer to have the scale-strips of one equal length, so that any one of them will extend from the shoulders *e* to the edge of the limb *a* of the square, as shown in the drawing, Figs. 1, 2, and 3.

The scale-strips represent, by certain marks on them, different sizes of coats, varying by breast-measure from twenty-six inches to forty-eight inches. For example, the scale-strip shown in Fig. 1 represents the largest breast-measure, and is numbered 48 on one side, and graduated accordingly. The figure 2 mark on the scale-strip represents one-fourth of the actual breast-measure when coats are cut

double, and one-half of such measure used in drafting. The figure 4 mark on the scale-strip represents one-fourth of the reduced breast-measure, and from the said mark, indicated by said figure 4 to the end of the scale-strip, it is graduated by marks indicating fifths, sixths, sevenths, eighths, tenths, and so on to sixty-fourths.

The figure-marks on the scale-strips which are below the figure 2, indicating breast-measure, represent "three sizes" or graduations necessary to obtain the requisite depth and width of the garment. This method of graduating the scale-strip, so far as described, applies to all of the strips alike. For a 48 scale-strip the variations in sizes will be about one inch and an eighth. For a 26 scale the sizes will represent about a half-inch.

It is obvious that these sizes will vary on the different scales according to the size of the coat to be cut.

The measure is taken with a tape-line in the usual well-known manner. Having taken the measure, I select a scale-strip corresponding to the breast-measure, which strip is fixed in the square, as I have above described. I then proceed to draft as follows, reference being had to the annexed diagrams, numbered Figs. 5, 6, 7, 8, and 9.

Figs. 5, 6, and 7 are diagrams for a frock-coat for the back. From 1 to 2 is $\frac{1}{2}$ and 3 sizes; from 1 to 3, natural waist; from 1 to 4, full length of waist; from 4 to 5, between 8th and 10th; from 3 to 6, between 8th and 10th, width of back. From 2 to 7 is $\frac{1}{5}$, and 2 to 14 is $\frac{1}{2}$, less $\frac{1}{12}$, of the breast-measure. Place square at 1, line O, ten inches at 1, 11 inches at P, and get lines A and H; 1 to 12, between 7th and 8th. 9 to 10 is $\frac{1}{32}$. 10 to 11 is $\frac{1}{64}$. 9 to 8 is $\frac{1}{10}$. 12 to 13 is $\frac{1}{64}$ of the breast-measure. Cut out back, and reverse line A and base to draft the fore part. Square base and center line. 3 to 2 is $\frac{1}{2}$. 2 to 1 is $\frac{1}{8}$. 3 to 10 is $\frac{1}{12}$. 10 to 11 is $\frac{1}{12}$; 10 to 21, $\frac{1}{7}$, less $\frac{1}{32}$. 11 to 22 is $\frac{1}{7}$. 3 to 12 is $\frac{1}{2}$ and 3 sizes. 12 to 13 is $\frac{1}{2}$, less $\frac{1}{6}$. 13 to 14 is $\frac{1}{16}$. Place line A on reverse side of back on line A of fore part, to form shoulder. 15 to 16 is $\frac{1}{10}$. 17 to 18 is $\frac{1}{32}$. Place square at line B, $4\frac{1}{2}$ inches at 16, 6 inches at 2, and form neck. 3 to 19 is length of back from 2 to 4. 19 to 20 is $\frac{1}{10}$. Place

square at $1\frac{3}{4}$ inches, and angle by 11, and square bottom of fore part. 3 to 4 is $\frac{1}{2}$ of waist, less $\frac{1}{20}$. 4 to 5 is length of back from 2 to 3. Angle by 3 and 5, putting $\frac{1}{2}$ and $1\frac{1}{2}$ sizes at 3 and 5. Carry line K to top of back; place back on line K, putting W of Fig. 5 at W, Fig. 6, and form side body, as represented on draft. 6 to 7 is $\frac{1}{20}$. 8 to 9 is $\frac{1}{32}$. For the sleeve: From 1 to 2 is $\frac{1}{20}$. From 1 to 3 is $\frac{1}{4}$. From 2 to 5 is $\frac{1}{5}$. From 3 to 7 is $\frac{1}{2}$ and 3 sizes. From 13 to 14 is $\frac{1}{32}$. From 8 to 9 is $\frac{1}{5}$. From 8 to 10 is $\frac{1}{2}$ and 3 sizes. From 2 to 6 is $\frac{1}{12}$. Place square at $1\frac{3}{4}$ inches, at 10 with 8 inches, 12 on line A, and get line B and length of sleeve.

Figs. 8 and 9 are diagrams for a sack-coat. For the back, draw line C. From 11 to 10 is $\frac{1}{24}$ in at waist. From 1 to 12 is $\frac{1}{2}$ and 3 sizes. Square base and waist lines by line D, also line 1 to 2; 1 to 2, between 7th and 8th. 2 to 3 is $\frac{1}{84}$. 12 to 6 is half, less $\frac{1}{12}$. Place 10 on square at 1, 11 at G, and get line A. Move square from 2 to 5 to get line F. 4 to 14 is $\frac{1}{20}$. 5 to 4 is $\frac{1}{16}$. Cut out back and reverse lines A, base and waist. 10 to 7 is 6 inches. 9 to 8 is 6 inches, for width of back. For the fore part, draw a line, A, on the cloth; place point of square at 1; carry out with the left hand 15 inches at line H to get base-line.

From 1 to 2 is $\frac{1}{8}$. 2 to 3 is $\frac{1}{2}$. 3 to 5 is $\frac{1}{2}$ and two sizes. 3 to 6 is $\frac{1}{12}$. 6 to 7 is $\frac{1}{12}$. 3 to 8 is $\frac{1}{2}$ and 3 sizes. 8 to 9 is $\frac{1}{2}$, less $\frac{1}{6}$. 9 to 10 is $\frac{1}{16}$. 6 to 4 is $\frac{1}{7}$, less $\frac{1}{32}$. 7 to 11 is $\frac{1}{7}$. Square line D by base-line up and down. Place back on line D, W at W, and form side body. 12 to 13 is $\frac{1}{20}$. 14 to 15 is $\frac{1}{32}$. 1 to 16 is length of back, from base-line to 16. 16 to 17 is $\frac{1}{6}$. Put reverse line A of back on line A of fore part, and form shoulder. 18 to 19 is $\frac{1}{10}$. Put $4\frac{1}{2}$ inches on square at 19 and 6 inches at 2, and form neck; mark length of waist on line D. Put 8 on square at L on line D; carry in 1 and $1\frac{1}{2}$ inch for spring-skirt. 20 to 21 is $\frac{1}{32}$.

What I claim as new, and desire to secure by Letters Patent, is—

The method herein described of laying out coats for cutting, by means of a recessed square provided with interchangeable scale-strips, graduated in the manner as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES H. NICHOLS.

Witnesses:

JOHN F. ACKER, Jr.,
C. H. McEWEN.