(No Model.) 2 Sheets—Sheet 1.

G. FREGA.

MODE OF CUTTING AND FITTING GARMENTS.

No. 314,526. Patented Mar. 24, 1885.

Fig. 2.

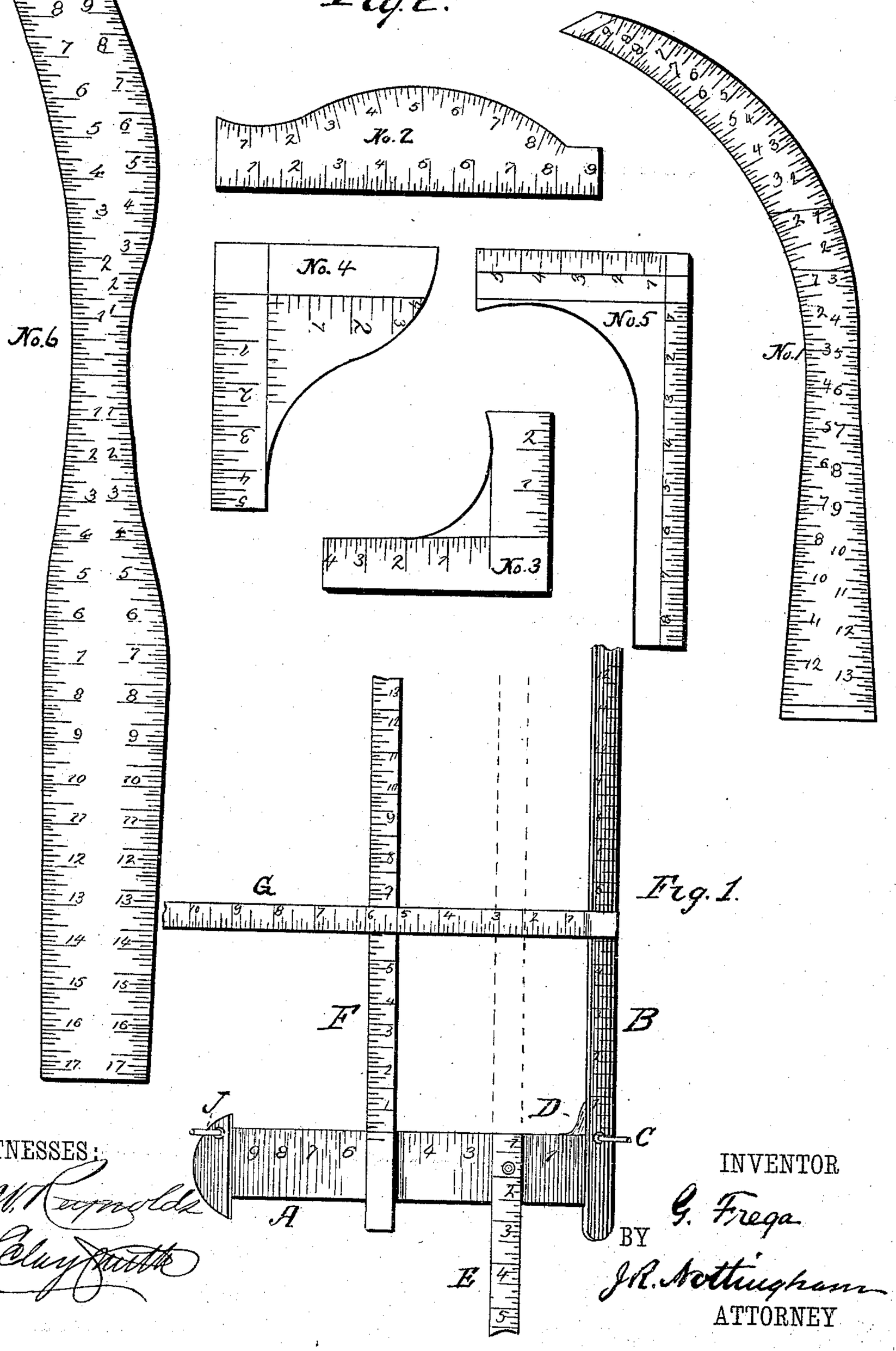


Fig. 1.

WITNESSES:

J. W. Reynolds

O. Kelly Tuttle

INVENTOR

G. Frega

BY

J. R. Nottingham

ATTORNEY

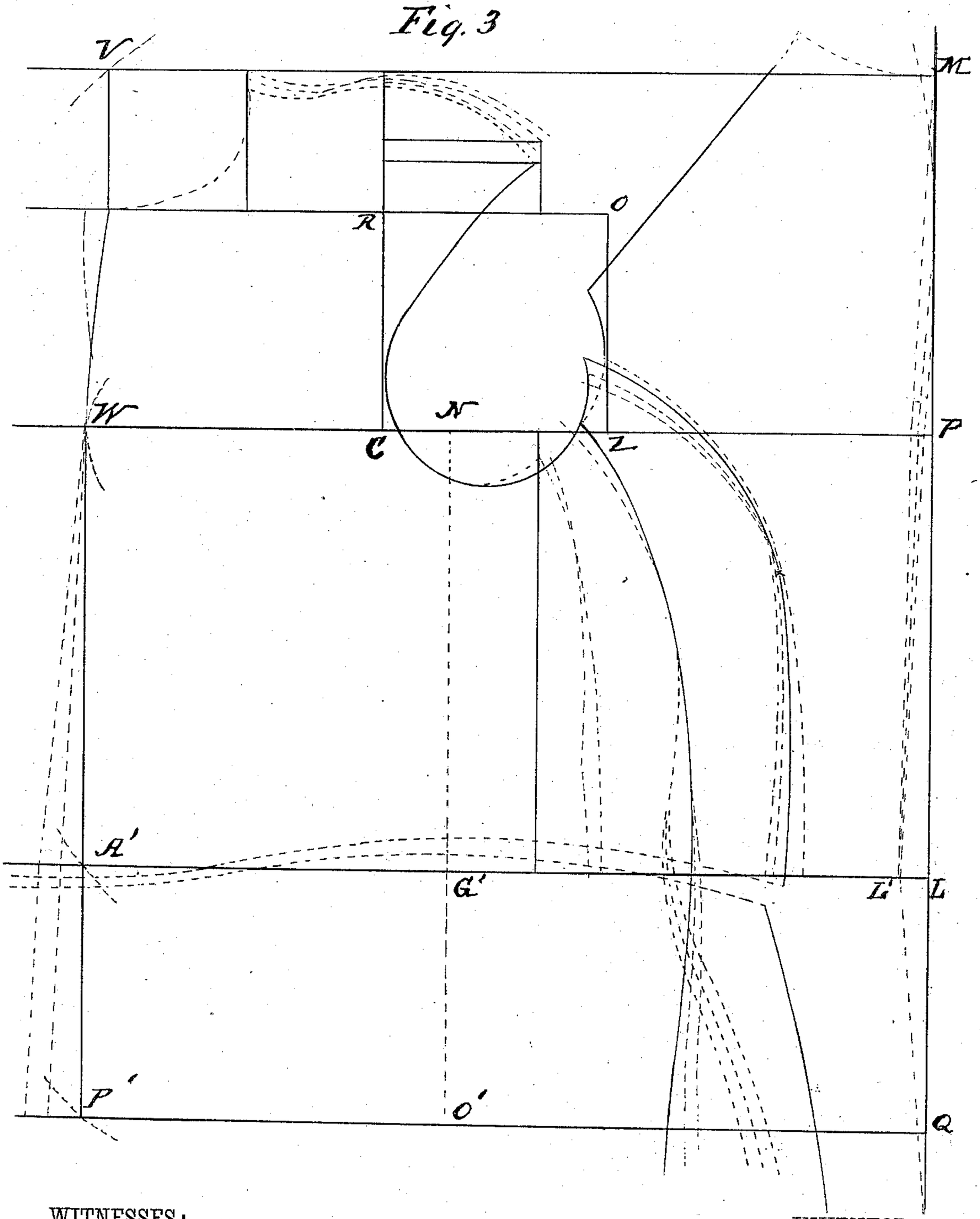
(No Model.) 2 Sheets—Sheet 2.

G. FREGA.

MODE OF CUTTING AND FITTING GARMENTS.

No. 314,526. Patented Mar. 24, 1885.

Fig. 3



WITNESSES:

J. W. Reynolds

H. Clay Smith

INVENTOR

G. Frega

BY

J. R. Nottingham

ATTORNEY

UNITED STATES PATENT OFFICE.

GIUSEPPE FREGA, OF PHILADELPHIA, PENNSYLVANIA.

MODE OF CUTTING AND FITTING GARMENTS.

SPECIFICATION forming part of Letters Patent No. 314,526, dated March 24, 1885.

Application filed July 11, 1884 (No model.)

To all whom it may concern:

Be it known that I, GIUSEPPE FREGA, a citizen of the Kingdom of Italy, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Methods of Cutting and Fitting Garments, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a method of cutting and fitting garments with facility and certainty of operation.

It consists, substantially as hereinafter claimed, in graphically producing upon paper or like material, from measurements taken from a single point upon the form of the person to be fitted, a plan or pattern of the proposed garment, conforming to its general outline, and capable of being shaped by appropriate tools, hereinafter described, to the exact configuration required for the sewer or maker-up, allowance being made for all necessary seaming. In my method these results are obtained by the employment, first, of an adjustable frame of spring metal, having an approximately semi-cylindrical contour conforming to the side of the body, and provided with a stud bearing a fixed relation to one of the arms of said frame, and serving as the central point from which all tape-measurements are taken; secondly, after the transfer of these measurements to the pattern-sheet, in accordance with the plan detailed below, in the employment of a number of curved pattern-pieces, for the purpose of forming with geometrical accuracy beyond the ordinary skill of the free-hand operator the curves constituting the meeting seam edges. These pieces are adapted by manipulation to describe curves corresponding to the varied peculiarities of form and proportion met with in the figures of different persons to be fitted, all of which will hereinafter more fully appear.

Referring more particularly to the accompanying drawings, wherein like letters indicate like parts, Figure 1, Sheet 1, represents a view of the frame used in the preliminary step of my improved method. Fig. 2, Sheet 1, represents the finishing-tools. Fig. 3, Sheet 2, represents the pattern sheet or diagram.

The adjustable frame shown in Fig. 1, and heretofore alluded to, consists of a broad curvilinear band, A, of spring metal, to one end of which is rigidly affixed the arm B, of like material. The two are united at right angles with each other, the angle of juncture being rounded out at D for the purpose of strengthening the connection between them. A stud, C, is located as shown, and at a point upon the arm A two inches from the outer edge of B is located the pivoted arm E, capable of revolution upon said pivot, so as to assume, for convenience of transportation or storage, the position shown in dotted lines, or in actual use that shown in full lines in the figure. Beyond E the piece A is provided with a sliding upright, F, which in turn is adapted to carry a similar arm, G, the whole constituting a rectangle the length of whose sides is dependent upon the position into which the sliding arms are moved. All of the arms A, B, F, G, and E are graduated upon their edges to a scale of inches.

In the operation of my invention I proceed as follows: The right arm of the person to be fitted is thrust through the opening in the frame-work, which is moved upwardly until the piece A is directly on a line with the armpit and the upright B rests firmly against the front of the shoulder. The adjustable arms F G are then moved inwardly until they come in contact with the back and top of the shoulder. The length of the sides of the rectangle thus formed indicates the thickness of the shoulder from back to front and from top to bottom. These dimensions are accordingly read off from the graduations upon the arms, and upon the dependent arm E is read off the distance to the waist and hip. A tape is then attached, by means of its ring or otherwise, to the stud C, and the distances from said stud to the top of the collar, the center of the back between the shoulders and the small of the back, are measured. These measurements serve as the basis upon which to construct the pattern-diagram, which is made as follows: A right line, M Q, is first established at the right-hand side of the sheet. At a convenient point thereon, as at P, is drawn the line P W at right angles to M Q.

The line P W represents the scye-line of the coat (which in the instance chosen is supposed to be a sack-coat) and M Q the back-seam. Upon the line P W is laid off the distance P

C, corresponding to the measurement from the center of the back between the shoulders to the stud C. From the point C, upon the line P W, is then erected the rectangle or square C Z O R, which I designate as the "scye-square." At a distance of one and a half inch from C, I establish the point N, and draw the perpendicular N O′, corresponding in position to the dependent arm E. Upon this line I lay off the distances N G′ and N O′, corresponding to the waist and length measures before taken, and from the point P, I lay off upon the line M Q the points M and L, corresponding to the distances from the stud C to the top of collar and small of back. From the points M and L, I erect perpendiculars M V and L A′, and from a lower point, Q, on the line M Q, corresponding to the length of the sack, I erect a perpendicular, Q P′. The upper side of the square C Z O R is also prolonged, as shown, the body of the coat being thereby divided into four subdivisions with limiting-lines. With the tape I now take from the stud C measurements to different points upon an imaginary vertical line passing through the center of the front of the body. Such measurements are taken first at the desired height of the collar, then at the height of the armpit, then at the waist-height, and finally at the desired length of coat. Now, from the point C of Fig. 3 as a center I describe arcs of circles having radii V C, W C, A′ C, and P′ C, corresponding in length to the measurements just taken, and intersecting, respectively, the collar-line M V at V, scye-line P W at W, waist-line L A′ at A′, and length-line Q P′ at P′. A line, V W A′ P′, is then drawn joining the said points of intersection, and constitutes the front line of the coat. The outline or skeleton diagram being thus established, I complete the pattern by means of the finishing-tools represented in Fig. 2. With No. 1 I establish the side seam, with No. 2 the shoulder-seam, with No. 3 the shape of the collar, and with Nos. 4 and 5 the scye-curve. The location of these curves upon the pattern-sheet may be varied according to the peculiarities of form of the person to be fitted, the curve itself always remaining the same. Thus in fixing the position of the side seam in fitting a person whose waist is small, the curved piece is rotated upon its center until it assumes one of the positions shown in dotted lines. It is evident, however, that the curve remains constant, and in tracing it upon the pattern-sheet the operator has a true and unvarying guide for his marker. So the position of the shoulder and collar curves may be varied in like manner, the curves themselves being made independently of the skill of the operator.

In making the side seam of a frock-coat I use the measure No. 6, conforming to the style of that garment. This curved piece is used by the cutter in the manner hereinbefore described for No. 1.

A strap secured to stud C and passed around the body and fastened to stud *c* may be employed to hold the rectangular frame in position while the measure of the person is being taken.

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

The method of fitting and cutting garments, which consists in establishing upon a pattern-sheet a base-line representing the back-seam, and a line at right angles thereto representing the scye-line, erecting on the latter at a distance from its foot equal to that of the rear and front of the shoulder from the center of the back a rectangle corresponding to the measured dimensions of the shoulder, and from the outer corner of said rectangle laying off upon the base-line points corresponding to the measured distances from a single point upon the form of the person to be fitted to the collar, small of back, and end of skirt, and erecting perpendiculars from such points, upon which the front measurements are laid off, and finally tracing the seam and outline curves upon the sheet from patterns of fixed or standard curvature, substantially as shown and described.

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

GIUSEPPE FREGA.

Witnesses:

WILLIAM FITCH,

M. LAURENZI.