

C. RYAN.

GARMENT MEASURING AND DRAFTING DEVICE.

(Application filed Feb. 24, 1902.)

(No Model.)

2 Sheets—Sheet 2.

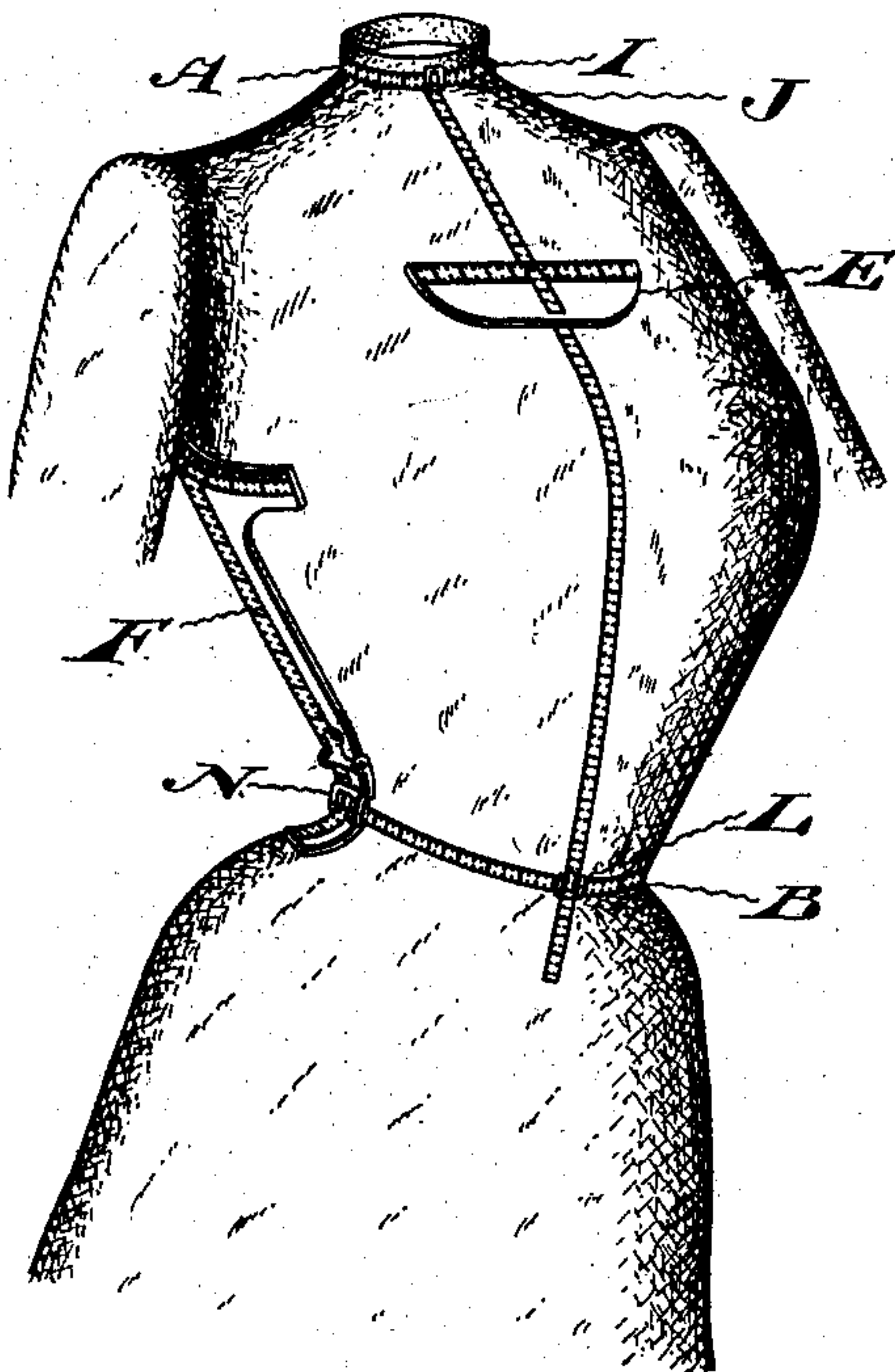


Fig. 4.

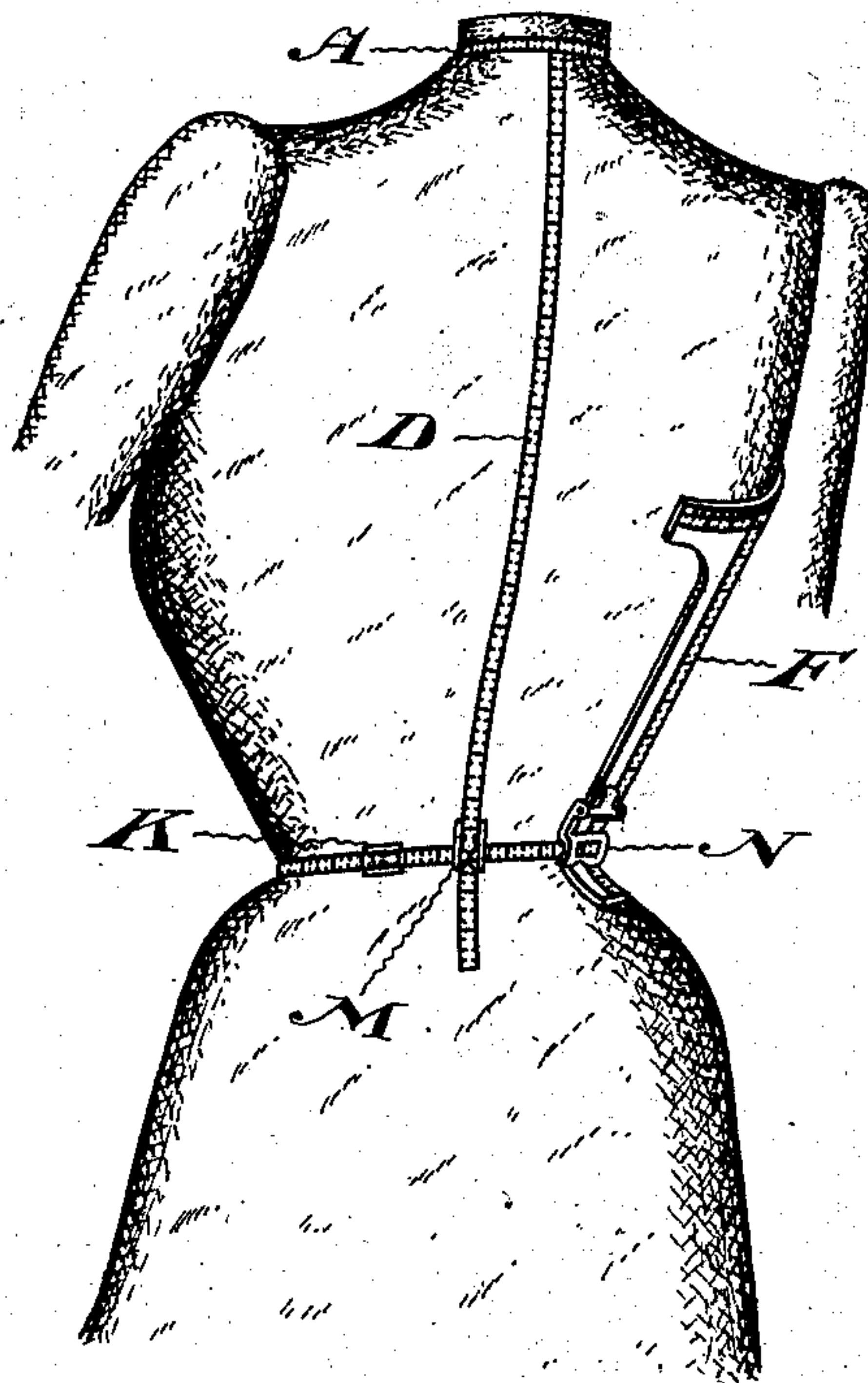


Fig. 5.

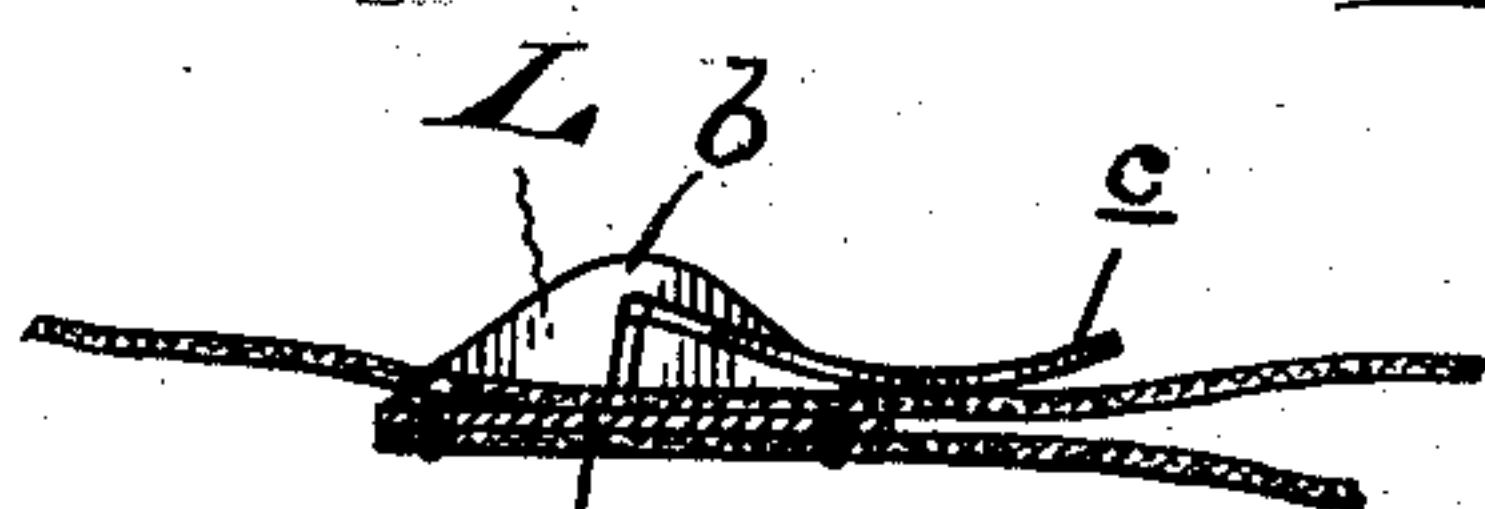


Fig. 10.

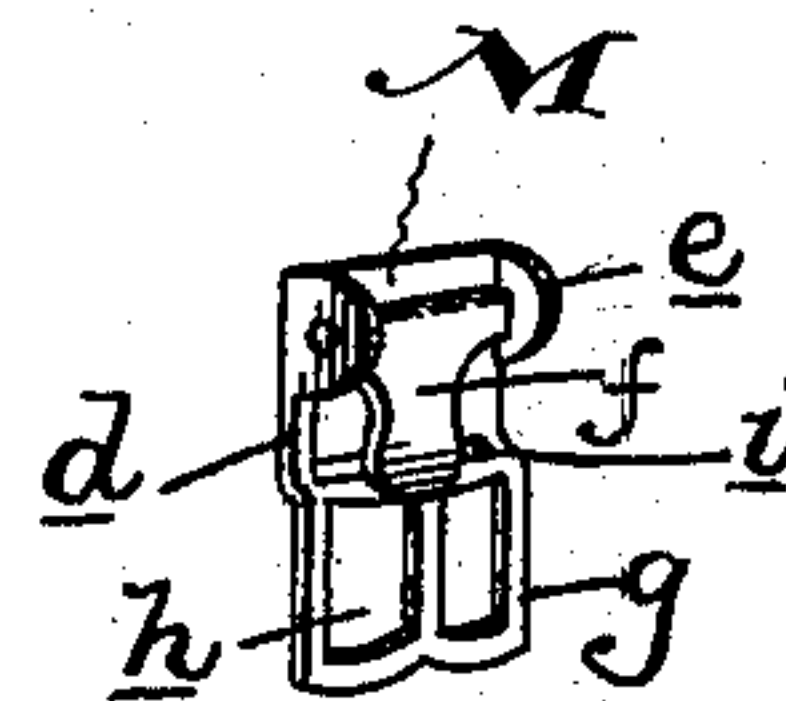


Fig. 11.

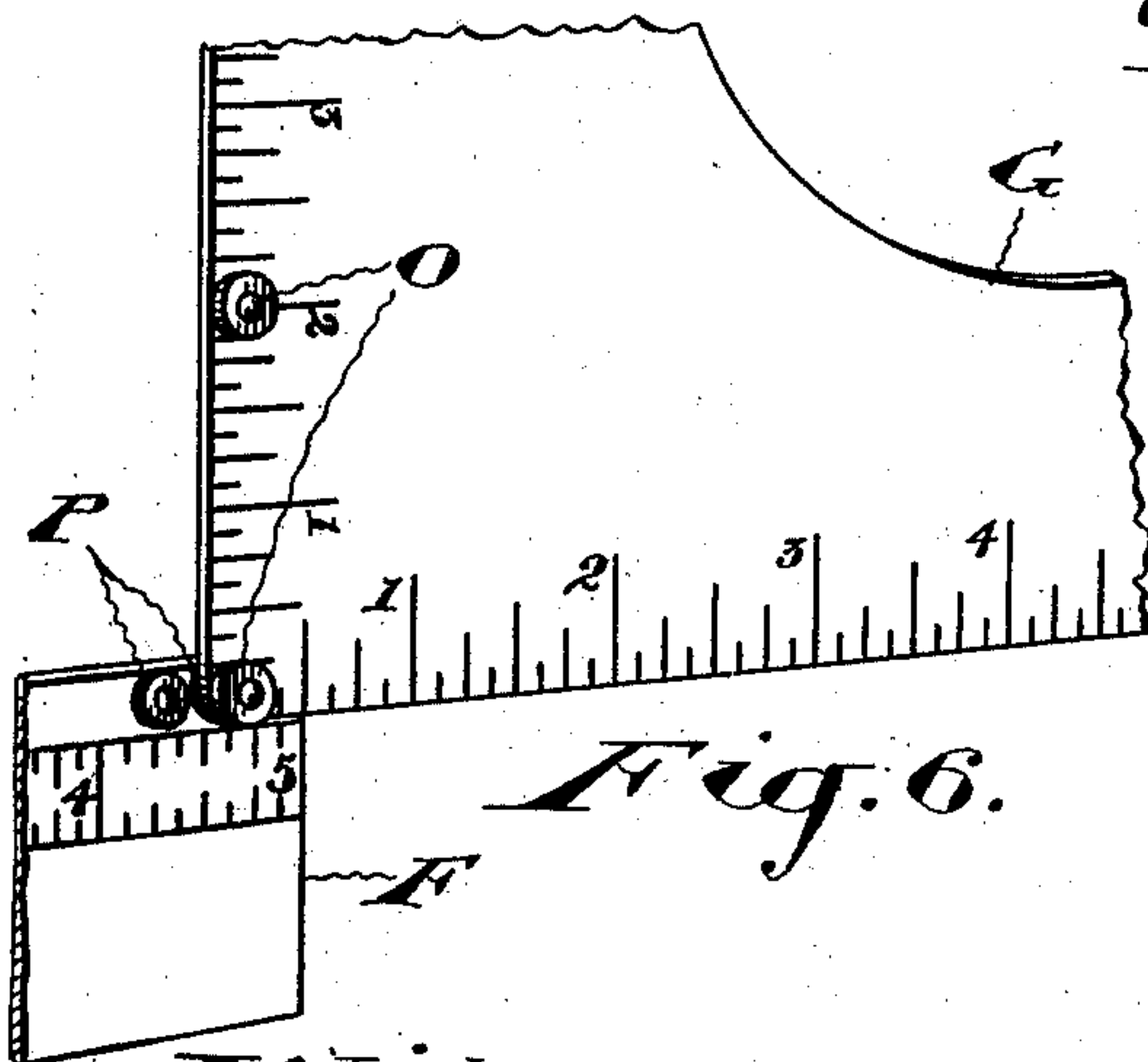


Fig. 6.

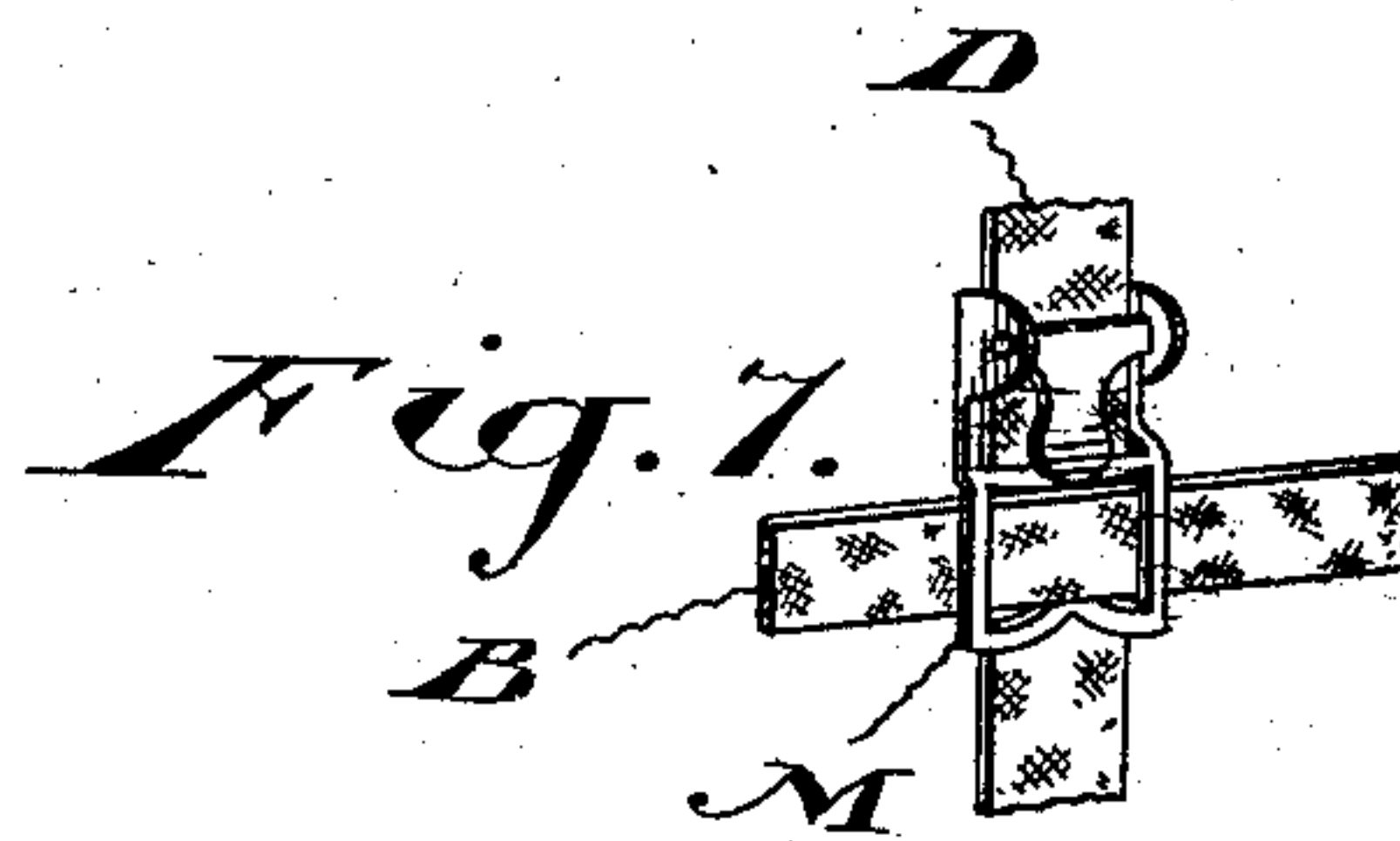


Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

CATHERINE RYAN, OF OTTAWA, CANADA.

GARMENT MEASURING AND DRAFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 717,284, dated December 30, 1902.

Application filed February 24, 1902. Serial No. 95,287. (No model.)

To all whom it may concern:

Be it known that I, CATHERINE RYAN, dress-maker, of the city of Ottawa, in the county of Carleton, Province of Ontario, Canada, have
5 invented certain new and useful Improvements in Garment Measuring and Drafting Devices, of which the following is a specification.

The object of my invention is to devise
10 means whereby such measurements may be taken and patterns drafted that accurately-fitting waists, coats, vests, and the like may be cut with great certainty and a minimum of labor; and it consists, essentially, of a flexi-
15 ble neckband, a flexible back designator extending down from the neckband, a flexible front designator extending down from and laterally adjustable on the neckband, a waistband vertically movable on the front designator and vertically and laterally movable on
20 the back designator, an underarm-T vertically and laterally movable on the waistband, and a shoulder-gage vertically movable on the front designator. With these parts
25 are combined a flexible measuring-square adapted for detachable connection with part of the body appliance and a drafting-square shaped as hereinafter described.

Figure 1 is a plan view of the parts of the
30 appliance which are connected to the body when measuring. Fig. 2 is a plan view of the measuring-square used in connection with the body appliance. Fig. 3 is a plan view of the drafting-square. Fig. 4 is a perspective
35 front view showing the appliance as used in measuring. Fig. 5 is a perspective back view showing the appliance as used in measuring. Fig. 6 is a perspective detail showing how the measuring-square is connected to the under-
40 arm-T. Fig. 7 is a detail of a combined clasp and slide. Fig. 8 is a perspective view of the inside of the upper part of the underarm-T. Fig. 9 is a modification of the scale somewhat enlarged. Fig. 10 is a sectional elevation
45 showing the construction of the clasps L, I, or K, hereinafter more fully described. Fig. 11 is a perspective view.

In the drawings like letters of reference indicate corresponding parts in the different
50 figures.

My appliance comprises a neckband A, waistband B, a center-front designator C, a

center-back designator D, preferably sewed at one end to the neckband, a shoulder-gage E, an underarm-T F, and a measuring-square G, 55 and a drafting-square Q. The neckband, waistband, and front and back designators are made of any suitable flexible non-stretchable fabric, while the shoulder-gage and underarm-T are preferably made of leather or 60 other material combining stiffness with a certain amount of flexibility. The underarm-T is also preferably provided with a curved steel band H, sewed into a pocket and adapted to retain the head of the underarm-T in the 65 necessary shape to closely fit the figure. It may also be stiffened with a vertical steel sewed in a suitable pocket, Fig. 8. The neckband is provided with scales, starting from a common zero-point and running in oppo- 70 site directions toward the ends, and one end is provided with a clasp I, of any suitable construction, by means of which the neckband may be tightly clasped around the neck. The center-back designator is secured to the 75 neckband substantially in line with the zero-point of the scales and is of sufficient length to extend down to or below the waist. This back designator is provided with a scale, preferably commencing with zero at the lower 80 edge of the neckband. The front designator is provided with a slide J, by means of which it may be moved along the neckband. It also extends to or below the waist and is provided with a suitable scale, preferably commencing 85 with zero at the lower edge of the neckband. The shoulder-gage E has slits formed therein or is otherwise constructed so that it may be made to slide upon the front designator. The shoulder-gage is provided with scales, 90 starting from a common zero-point in the center and extending out toward each end, preferably to the distance of five inches or more. The waistband is provided with a clasp K, by means of which it may be fastened tightly 95 around the waist. The front of the waistband is provided with a clasp L, through which the center designator passes and by means of which it may be adjustably secured to the waistband. This latter is provided 100 with scales extending toward either end from a common zero-point coincident with the center of the clasp L. In Fig. 10 is shown a representation of the clasp L, which also repre-

sents clasps I and K, hereinbefore referred to. These clasps consist of a frame *a*, to which one part of the measuring device may be secured by sewing, suitable holes being provided for that purpose. Lugs *b* are turned up at each side, in which is pivoted the cam-lever *c*. This construction is commonly employed in clasps, and therefore requires no further description. The back designator is provided with a common eccentric lever-clasp combined with a slide M, so that the waistband and back designator are free to slide horizontally relative to one another, and at the same time the clasp may be adjusted to secure the waistband and back designator together at any suitable vertical distance from the neckband.

A representation of the clasp M and the clasp N, hereinafter referred to, is found in Figs. 7 and 11, in which figures *d* represents the frame, *e* lugs, and *f* the cam-lever. The frame is also provided with an extension *g*, having slots *h* formed therein for the passage of one of the parts of the apparatus. The other part is passed through the slot *i* and thence beneath the cam-lever *f*. This permits the clasp sliding freely on one side of the apparatus, while it may be clasped in any desired position on the part at right angles thereto passing through the slots *h*. The underarm-T F is secured to the side of the waistband by a similar combined slide and clasp N. Down the center of this underarm-T is formed a scale, commencing at the upper edge of the head of the T, and at or near the upper edge of the underarm-T are formed scales, commencing from a common zero-point coincident with the central line of the vertical scale and extending in each direction to the ends of the T.

In my apparatus all the scales are expressed in the same unit. In English-speaking countries this will usually be the inch, though any other suitable unit may be employed.

The measuring-square G is preferably formed of leather or other stiff flexible material, provided with a suitable scale along its outer edges on each side. Secured to the corner of the measuring-square are one or more half dome-fasteners O, while to the top of the underarm-T are secured the other halves P of the said dome-fasteners, located in such positions that the measuring-square and the underarm-T may be detachably fastened together, with the edge of the square coincident with such portions of the scales on the underarm-T as may be desired. Two half dome-fasteners are shown on the measuring-square, for the reason that two of them make it possible for the measuring-square to be attached rigidly to the underarm-T, so as to insure this being exactly in line with the top of the T. The dome-fasteners are well known as those used for glove-fasteners and need not be particularly described. In the drawings the parts of the dome-fasteners are so secured to the underarm-T and the measuring-square

that the edge of the measuring-square may be brought in line with the scale in the underarm-T at one-quarter-inch intervals for the larger portion of each of the scales on the head of the T. (See Fig. 1.) In Fig. 6 only one half-fastener is shown on the underarm-T besides that engaged with the other half-fastener on the square.

To adjust the appliance, place the neckband around the neck and fasten it at the left side, making sure that the back designator is in the center of the back, and draw the front designator to the center of the front, if it is not already in the proper position. Now place the waistband around the waist as far down as it will lie and fasten very tightly at the left side, making sure that the front designator is in the center of the front. Draw the front designator down tight and fasten in place by the clasp L. Draw the back designator tight and fasten in the proper place on the waistband by the clasp and slide M. Push up the underarm-T as high as is comfortable under the right arm, placing the center as nearly as possible under the center of the armpit, at the same time keeping its square with the waistband. The shoulder-gage is placed substantially at half the distance between the bust and neck. From the appliance can now be read the length of front on the front designator, the length of the back on the back designator, the size of the neck on the neckband, the size of the waist on the waistband, the underarm length on the underarm-T, and the length to chest on the front designator where it is cut by the upper edge of the shoulder-gage, and the length to bust on the front designator. The shoulder-gage enables me to accurately measure the width of the neck. First place the measuring-square with the short arm parallel to and preferably in contact with the shoulder-gage, with its long arm flat to the figure and as close to the neck as possible where the long arm of the measuring-square cuts the shoulder-gage. The neck width can then be read off on the shoulder-scale. Various shoulder and neck measurements may also be taken from the shoulder-gage by means of the measuring-square. The scales on the head of the underarm-T enable the arm's width to be taken readily and also afford starting-places for the taking of such other measurements as may be necessary. Such measurements and any others that may be used are readily taken by means of the measuring-square. In taking some measures with this square it may be connected, by means of the dome-fasteners described, with various points on the upper scales of the underarm-T, according as it is desired to take measures from the front of the arm or from underneath the arm. The measuring-square being flexible enables it to be laid close on the body, and thus to follow its contours.

A very important feature of my invention is the use of double scales on the parts of the device—that is, scales with duplicates set

exactly opposite. Extra long marks on single scales A' in Fig. 9 would also answer, but would not be so convenient, as owing to the limited width of most of the bands or parts on which the scales are marked the one-eighth and one-fourth line could not be made long enough to be serviceable without rendering them practically indistinguishable from the one-half and whole inch marks. With double scales, as shown, no difficulty of this kind can arise, and it is very easy to determine from any double scale when another part is exactly at right angles or "square" to the scale.

I find it very important in taking measures from any of these parts that they shall be square to one another wherever they cross and that square measurements may be taken from them with the measuring-square. Having taken whatever measures may be deemed necessary, the pattern may be drafted by means of the drafting-square Q, which is preferably of the same dimensions as the measuring-square, but which is curved on its inner side, as shown. In the angle of the square is a curve of comparatively short radius, useful in drafting parts of the arm's eye and extending in a flat ogee curve, terminating at the end of the long arm of the square in a curve of considerably shorter radius than the curve of the ogee.

What I claim as my invention is—

1. In appliances of the class described, the combination of a flexible neckband; flexible back and front designators so connected with the neckband that they may be made to hang vertically from the neckband down the middle lines of the back and chest; a flexible waistband adapted, when it is drawn tight around the waist, to hold the designators tight on the body on the middle lines hereinbefore referred to; and a shoulder-gage of stiff flexible material vertically movable on the front designator, substantially as described.

2. In appliances of the class described, the combination of a flexible neckband; flexible back and front designators so connected with the neckband that they may be made to hang vertically from the neckband down the middle lines of the back and chest; a flexible waistband, adapted when it is drawn tight around the waist, to hold the designators tight on the body on the middle lines hereinbefore referred to; and an underarm-T of stiff flexible material vertically and laterally movable on the waistband at its lower end and free at its upper end, substantially as described.

3. In appliances of the class described, the combination of a flexible neckband; flexible back and front designators so connected with the neckband that they may be made to hang vertically from the neckband down the middle lines of the back and chest; a flexible waistband adapted when it is drawn tight around the waist, to hold the designators tight on the body on the middle lines herein-

before referred to; a shoulder-gage of stiff flexible material vertically movable on the front designator; and an underarm-T of stiff flexible material, with upper part shaped to conform to the body, vertically and laterally movable on the waistband, substantially as described.

4. In appliances of the class described, the combination of a flexible neckband having scales marked thereon running from a common zero-point toward each end; a flexible back designator secured to the neckband at the zero-point and having a double scale marked thereon commencing at the upper end; and a flexible waistband having double scales marked thereon running from a common zero-point toward each end, and adapted to hold the back designator tight on the body, substantially as described.

5. In appliances of the class described, the combination of a flexible neckband having scales marked thereon running from a common zero-point toward each end; a flexible back designator secured to the neckband at the zero-point and having a double scale marked thereon commencing at the upper end; and a flexible waistband having double scales marked thereon running from a common zero-point toward each end, and adapted to hold the back designator tight on the body; and a flexible front designator laterally slidable on the neckband and vertically slidable on the waistband at the zero-point, a double scale being marked on it commencing at the upper end, substantially as described.

6. In appliances of the class described, the combination of a flexible neckband having scales marked thereon running from a common zero-point toward each end; a flexible back designator secured to the neckband at the zero-point and having a scale marked thereon commencing at the upper end; a flexible waistband having scales marked thereon running from a common zero-point toward each end, and adapted to hold the back designator tight on the body; a flexible front designator laterally slidable on the neckband and vertically slidable on the waistband at the zero-point, a scale being marked on it commencing at the upper end; and an underarm-T of stiff flexible material with upper part shaped to conform to the body, laterally and vertically movable on the waist-belt and provided with three scales commencing at a common zero-point at the center of the T and extending to each end and the bottom, substantially as described.

7. In appliances of the class described, the combination of a flexible neckband having double scales marked thereon running from a common zero-point toward each end; a flexible back designator secured to the neckband at the zero-point and having a double scale marked thereon commencing at the upper end; a flexible waistband having double scales marked thereon running from a com-

mon zero-point toward each end, and adapted to hold the back designator tight on the body; a flexible front designator laterally slidable on the neckband and vertically slidable on the waistband at the zero-point, a double scale being marked on it commencing at the upper end; and a shoulder-gage of stiff flexible material vertically movable on the front designator and provided with two scales running from a common central zero-point toward each end, substantially as described.

8. In appliances of the class described, the combination of a flexible neckband having a scale formed thereon; a depending front designator connected to the said neckband and having a double scale formed thereon commencing at the top; and a shoulder-gage of stiff flexible material vertically movable on the said designator and provided with scales starting from a common central zero-point and running toward each end, substantially as described.

9. In appliances of the class described, the combination of a flexible waistband; and a stiff flexible underarm-T vertically adjustable thereon and having scales formed thereon running from a common zero-point toward each end, substantially as described.

10. In appliances of the class described, the combination of a flexible waistband; a stiff flexible underarm-T connected thereto; and a stiff flexible measuring L-square; and means for detachably connecting together the square and underarm-T, substantially as described.

11. In appliances of the class described, the combination of a flexible waistband; a stiff flexible underarm-T vertically movable on

the waistband and having a scale formed on its upper end; an L-square having scales formed thereon extending along each arm; and means for detachably connecting the square to the underarm-T with its corner in alinement with any one of a plurality of points on the scale on the underarm-T, substantially as described.

12. In appliances of the class described, the combination of a flexible waistband; a stiff flexible underarm-T vertically movable thereon and having scales formed thereon extending toward each end of the T from a common zero-point; an L-square having scales formed thereon extending along each arm; and means for detachably connecting the square to the underarm-T with its corner in alinement with any one of a plurality of points on the scales on the underarm-T, substantially as described.

13. In appliances of the class described, the combination of a flexible neckband; a flexible back designator extending down from the neckband; a flexible front designator extending down from and laterally adjustable on the neckband; a waistband vertically movable on the front designator and vertically and laterally movable on the back designator; an underarm-T vertically and laterally movable on the waistband and a stiff flexible shoulder-gage vertically movable on the front designator, substantially as described.

Ottawa, February 11, 1902.

CATHERINE RYAN.

In presence of—

J. B. RATHBONE,
W. J. BAMBRICK.