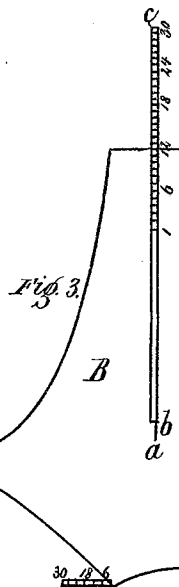
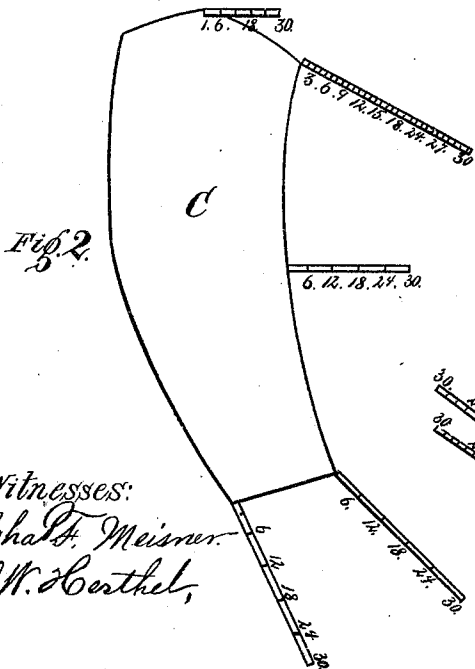
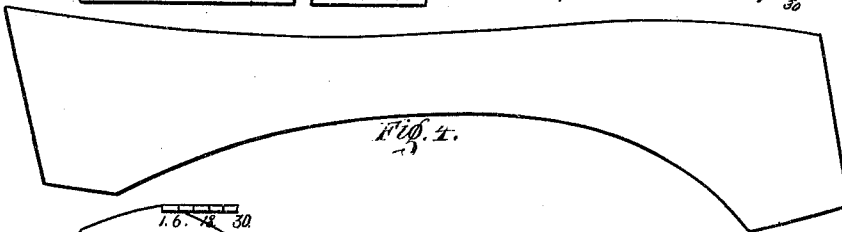
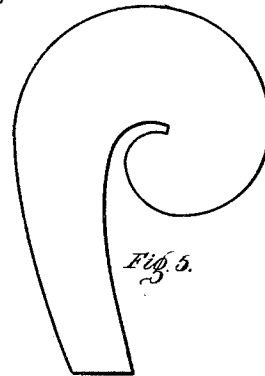
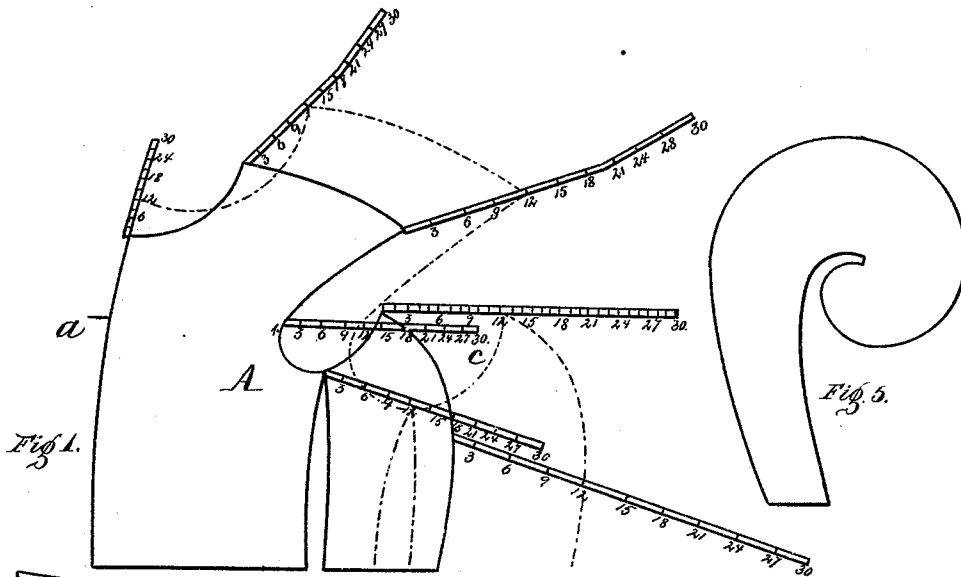


C. A. STEINER & C. LASS.

APPARATUS FOR DRAFTING PATTERNS.

No. 182,968.

Patented Oct. 3, 1876.



Witnesses:
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J. W. Barthel,

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Carl Lass per
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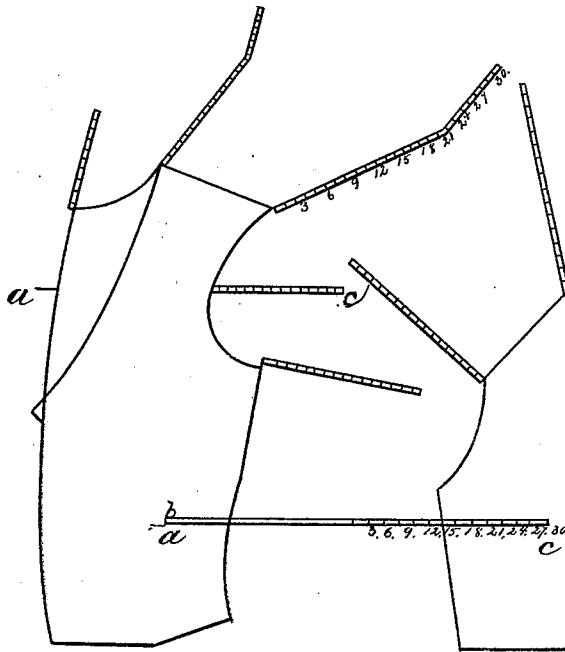


Fig. 6.

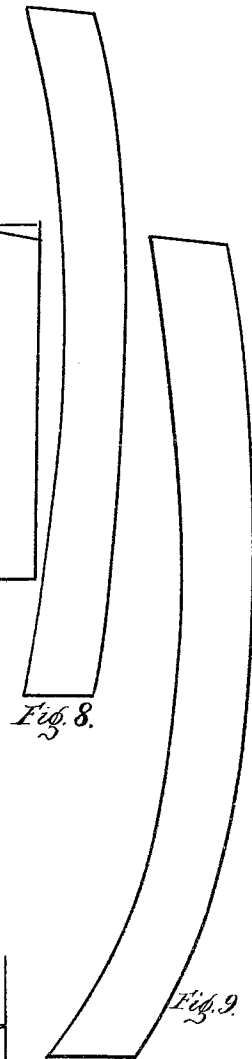


Fig. 8.

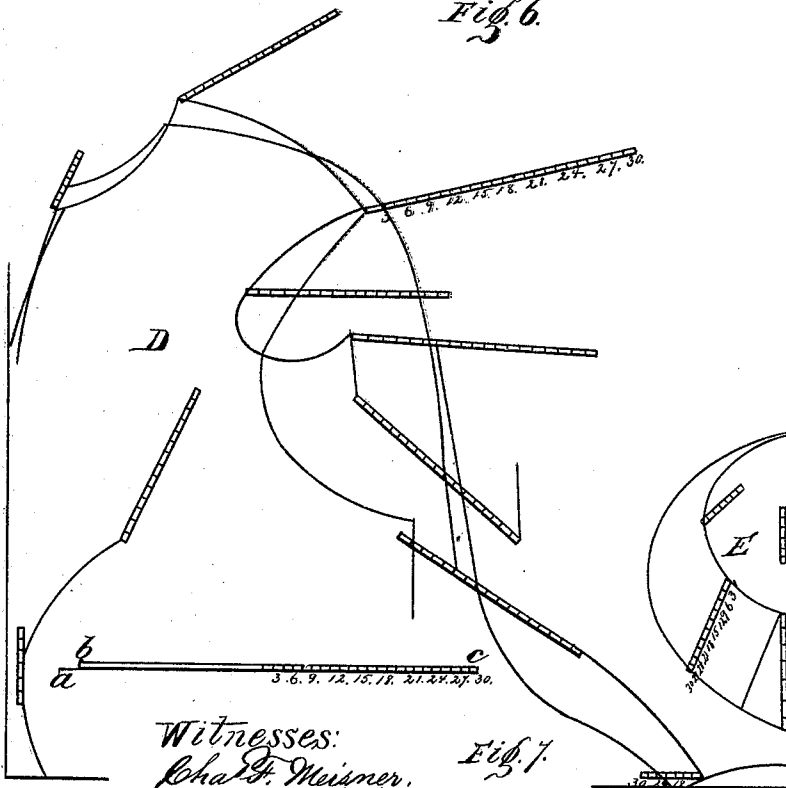


Fig. 7.

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UNITED STATES PATENT OFFICE.

CARL A. STEINER AND CARL LASS, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN APPARATUS FOR DRAFTING PATTERNS.

Specification forming part of Letters Patent No. **182,968**, dated October 3, 1876; application filed May 11, 1876.

To all whom it may concern:

Be it known that we, CARL AUGUST STEINER and CARL LASS, both of St. Louis, county of St. Louis, and State of Missouri, have invented an Improved System of Measuring and Cutting Garments, of which the following is a specification:

This invention relates to an improved system of devices to be used in measuring and cutting cloth for garments—such as coats, mantles, paletots, pelerines, vests, &c.

The object of this invention is to avoid the great loss of time in making requisite paper patterns or figures, according to which the cloth to constitute the garment is to be cut; also, to avoid the waste of cloth arising from an incorrect manner of measuring, and the necessity of testing the apparel on the person before it is finished. Especially it is the object of this invention to greatly facilitate the correct measuring and cutting of the cloth for garments of the class above referred to, and to provide a pattern adapted for these purposes, requiring no great skill on part of the user or operator to at all times be capable of directly cutting the figures out of the cloth, and to make or obtain a fit, as the nature of the case requires.

The nature of our invention consists in an improved scale to correspond to the different sizes of garments of the character above alluded to, and to the manner of applying same to cut the figures, all of which will now more fully appear.

Of the drawing, Figure 1 represents our pattern for the coats, and the like. Fig. 2 represents our pattern for the sleeves of coats; Fig. 3, for the hind part of coats; Figs. 4, 5, for ruler devices; Fig. 6, a pattern for the front and hind parts of vests; Fig. 7, a pattern for paletots, pelerines, &c. Figs. 8, 9 are ruler devices.

Our system of cutting a garment or making a pattern for this purpose is based on the breast-measure of the body, and contains the various patterns for the whole of said breast-measure, from twenty-four inches to forty-eight inches. The body, according to our calculation, is divided into four parts; but, in cutting the cloth, the same is doubled, two parts being always cut out; and, hence, our system

has only to do with one-half the breast-measure. This half breast-measure we divide further, into two parts, because we have to make two parts of the garment—front part, and back part. Hence, we use the fourth part of the breast-measure, that forms the fourth part of the garment.

By breast-measure is to be understood the measure taken around the body under the arms. By the greatest breast-measure (which we assume here sufficient for all practical purposes) we mean forty-eight inches. The fourth part of forty-eight inches breast-measure is, therefore, twelve; and hence the measure of the largest front part (and likewise hind part) is equal to twelve inches; of the half-coat, twenty-four inches; and of the whole coat, forty-eight inches. The smallest breast-measure is equal to twenty-four inches; the half, twelve, and the fourth six, inches.

Supposing, now, the actual breast-measure were thirty-six inches; then we have a surplus of twelve inches in the breast-measure, taking the smallest, as normal measure, to be twenty-four inches. This surplus is to be divided by four, and to be added to the four normal measures. In the same way that the horizontal line increases the vertical line also increases, but only one-half as much for each part.

As shown in the figures, our scale is therefore twelve inches—that is, from *a* to *c*. Now, in taking the one-fourth of the smallest figure here assumed—twenty-four inches—this gives us, as per our scale, the measure indicated from the point *a* to figure 1. All remaining enlarged sizes of garments or measurements as per our scale are, therefore, indicated by the figures from 1 to 30, representing, in all, twenty-nine different patterns, figures, or sizes, for garments of the various kinds before stated.

By reference to Fig. 1, the pattern A shown is that for the measurement or cutting of the cloth for coats, &c. The full lines, being the front, neck, sleeve-opening, sidelines, &c., constitute the pattern for the smallest figure or garment, and therefore are embraced by applying our scale at the points of these lines, as indicated.

The breast-measure of this pattern is from *a* to figure 1, being six inches, and, as it is the

one-fourth of the entire figure, the size represented in full is, as above stated, twenty-four inches. Any enlarged figure can readily be determined after taking the breast-measure, dividing it into four parts, and, applying one end from *a* on the scale to any figure, the other end of the measure reaches between the extreme figures, 1 and 30. It will therefore be noted that, as shown in Fig. 1, the pattern represents measurements of all the different sizes or figures, the assumed breast-measure being forty-eight inches. Having, as per the full lines, the lines for cutting cloth once given, these same lines can be imitated at the different points or figures between 1 and 30, and, as per the scale applied, so that the measurements both lengthwise and vertically can readily and in the required proportion be enlarged by the cutter.

In Fig. 3 is shown the pattern B for the hind part of the coat, and at C for the sleeve for the same garment. The full lines in both cases represent the measurement of the smallest figure or pattern, which serves likewise the purpose of a guide for the drawing, marking, or cutting of the lines for any enlarged like parts of the same garment. Our scale is therefore applied at the points indicated in said figures, so that the increase of measurement required can be determined for the pattern given, and enlarged in the further pattern wanted, the one-fourth measurement of the breast-width having been taken and applied to the points of the scale, as seen in the figure. Thus, in corresponding proportion to the size of the body part of the coat, the back part and the sleeves are likewise enlarged.

For waistcoats, vests, &c., Fig. 6 represents our pattern, showing the same for the front part of the vest, and also for the hind part thereof. The full lines shown are the guide-lines, to be followed in marking or cutting any enlarged garment, our scale being applied at the points indicated, so that, after taking the one-fourth breast-width, as previously stated, and applying the result to the scale, the increase for the garment in size is attainable in like manner, as described.

Lastly, in Fig. 7 we illustrate a pattern, according to our improved system of measurement, for the marking and cutting of the cloth for paletots and pelerines, the former being shown at D and the latter at E. The full lines are the measure of the smallest figure, and, the scale being applied as indicated, our enlargement for a pattern is obtainable by the same method of application as before given.

It should be stated that in all the figures the full lines are not an arbitrary adoption so far as the curve, shape, or style of the line is concerned, since any of these lines can be altered to suit the fashion, the points of applying the scale being, however, retained. For wadding, padding, &c., allowance can readily be made by taking a margin for same; thus, by applying one end of the tape-measure to point *b* of the scale, (see Fig. 7,) the other end of the tape will reach to the correct figure with said allowance. Where the scale is shown, the space alongside should be cut or left free, so that the operator can mark the points on the cloth, on the top of which, as is usual, the pattern is laid.

To use our measure or invention it is necessary to carefully take the breast-measure. This done, fold the tape in four parts, and apply one end thereof on the scale at *a*; the other end then indicates the one-fourth measure, which is the figure that is to constitute the required pattern. The figure given by the scale from the one-fourth fold is the point where the chalk is to be applied; and hence this is done at all places where that figure is to be seen on the pattern. The points all marked, the rulers are next used to assist in tracing or marking the lines, as per the fashion of the figure wanted. In Figs. 4, 5, 8, 9, the ruler devices used for the purpose stated are shown.

It is therefore apparent that our invention is adapted specially to save time, labor, and expense—that it is a reliable system for the purpose here treated of, embracing in its patterns a small size suited for children's garments, as well as all sizes required for the use of adults.

What we claim is—

1. In combination, with the patterns shown in Figs. 1, 2, 3, 6, 7, the rule or scale *a b c*, having the lettered spaces representing the different figures as to size, as shown and described, as and for the purpose set forth.

2. The combination of the scale herein shown and described, the pattern illustrated in Figs. 1, 2, 3, 6, 7, and the ruler devices 4, 5, 8, 9, as and for the purpose set forth.

In testimony of said invention we have hereunto set our hands.

CARL AUGUST STEINER.
CARL LASS.

Witnesses:

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CHAS. F. MEISNER.