

MUELLER & KOELLER.

Tailors' Measure.

No. 92,873.

Patented July 20, 1869.

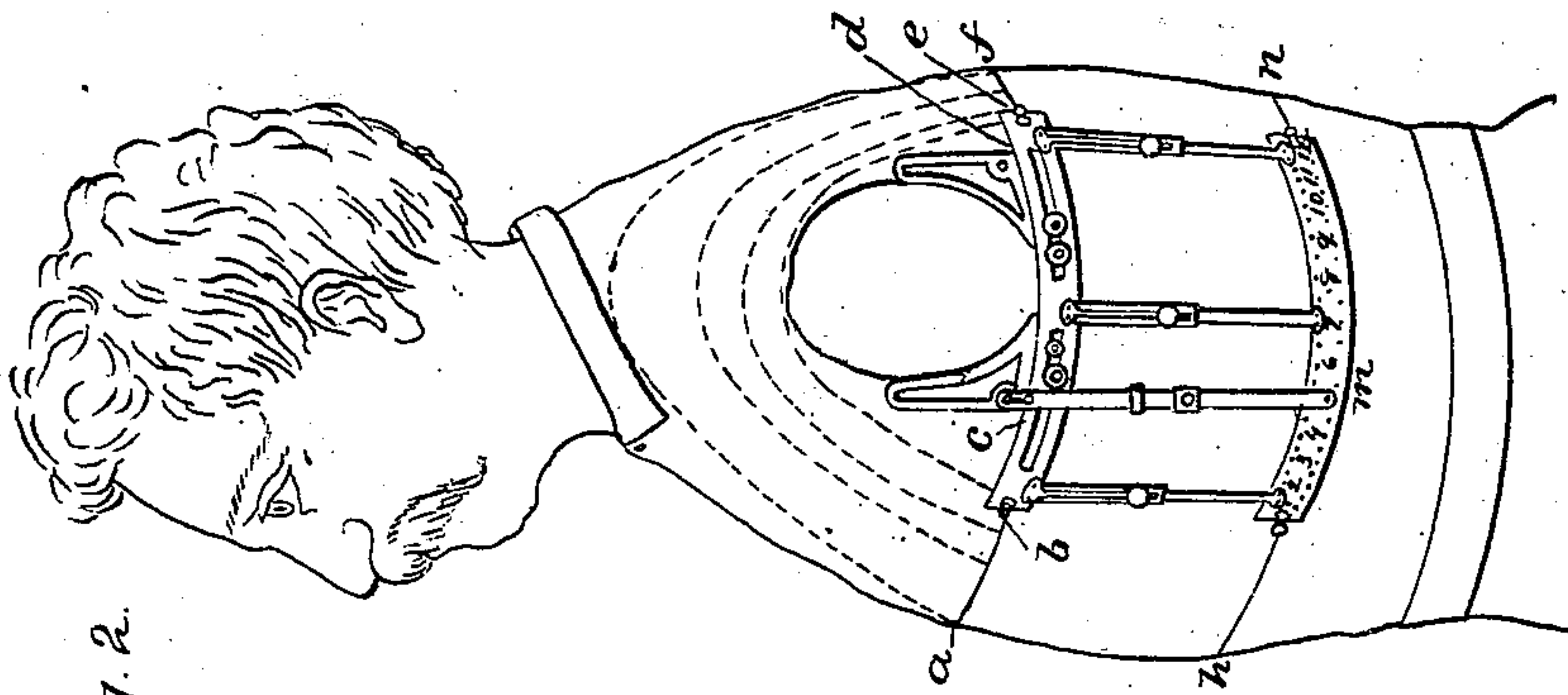


Fig. 2.

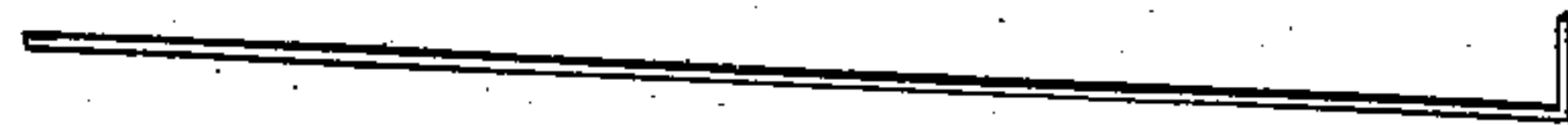


Fig. 3.

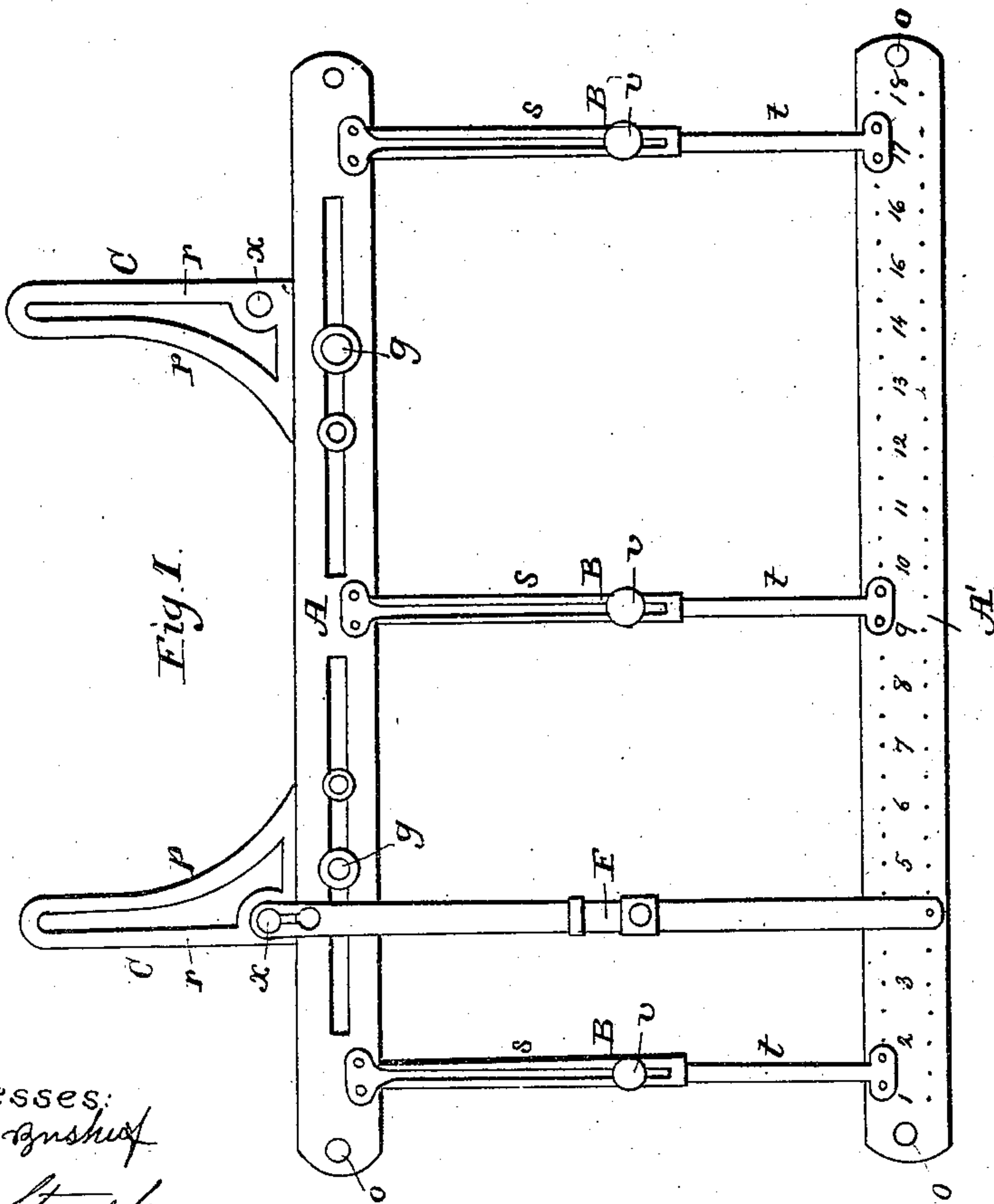


Fig. 1.

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# United States Patent Office.

FRITZ MUELLER AND HERMANN KOELLER, OF NEW YORK, N. Y.

Letters Patent No. 92,873, dated July 20, 1869.

## IMPROVEMENT IN TAILORS' MEASURING-APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, FRITZ MUELLER and HERMANN KOELLER, of New York, in the county of New York, and State of New York, have invented a new and useful device for taking the measures of gentlemen and ladies, to cut patterns for coats, vests, and similar garments, which we propose to call "Tailors' Measuring-Instrument;" and we 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 part of this specification, in which—

Figure 1 represents a front view, and

Figure 2, a view of the manner in which it is attached to the human body when the measures are to be taken.

The same letters in both figures represent the same parts of the device.

A A', in fig. 1, are two extensible strips of sheet-metal. A' is graduated in inches and fractions of inches. They are fastened to the sliding rods or blades B B B, in such a manner that they are parallel to each other.

B B B are perpendicular to the extensible strips.

o o o o are pivots, for attaching strings, India-rubber ribbons, or extensible metallic strips, in order that the instrument may be adjusted to the body, as represented in fig. 2.

C C are frames of sheet-metal. The inner parts of them, p p, are rounded off, so as to adapt themselves to the upper arm, (see fig. 2,) while the outer parts, r r, are straight. They are attached to the extensible strip A in such a manner that parts r r are perpendicular to the same, and that they may be slid in a horizontal direction, forward and backward.

q q are screws, by means of which the frames may be adjusted to any desired point of strip A.

The upper parts, s s s, of the perpendicular rods or blades B B B, are grooved, and the lower parts are made to slide in them.

v v v are screws, by means of which the measuring-instrument may be adjusted according to the size of the person.

x x are pivots. They are fastened to the frames C C, and destined to take up the blade or plummet F, so that it may freely swing in them. The latter can be elongated in a similar manner as the perpendicular rods or blades.

Figure 3 represents a transverse section of it.

In order to take the measures of a person, the instrument is held either under the right or left "sege" or arm-hole, so that the two frames C C, with their pivots outward, lie between the arm. The graduated extensible strip A' is now adjusted in such a way that it comes to rest upon the hip, when the instrument is fastened around the breast, as indicated. Hereafter the blade or plummet F is set in the front pivot, when

it is adjusted to the distance between the two extensible strips, so that its lowest part will rest upon the graduated strip A'. This plummet shows us the position of the person of which the measure is to be taken. We then mark the number indicated by the plummet, when the taking of the measures may be proceeded with.

First, the distance is measured from the arm-hole to the hip, then the length from the middle of the breast *a* (vide fig. 2) to a point marked *b*, upon the drawing, which indicates about half the distance from point *a* to the arm. We now take the length from this arbitrarily-chosen point to *c*, or the right angle formed by the front frame and the upper strip A of the device. Then the distance is taken from *c* to *d*, from *d* to point *e*, which indicates also half the distance between the centre of the back *f* and the sege. Hereafter the width is measured from the centre of the waist *h* to the number indicated by the plummet, and from here to point *n* of the back.

We finally measure the distance over the shoulder from the top parts of the frames, from *b* to *e*, and from *a* to *f*, as represented in the respective figure.

These measurements being taken, the instrument is removed from the body, and placed on a sheet of paper sufficiently large for a pattern of the fore part of the garment to be made. The plummet is then restored to its former position. Lines are now run along the latter, the two horizontal strips, and the inner parts of the frames. This done, the instrument is put aside, the lines are sufficiently extended, and when all the points of the width and length, previously taken, have been marked, the diagram of the pattern is shaped by their aid.

Owing to the uncertainty of producing exact patterns of costumes by the old way of taking measures, diagrams of various patterns of certain sizes are largely made use of by tailors. In employing them, they construct diagrams in reduced scales, from which they cut their patterns.

It was Compaign, in Paris, who first introduced a set of graduated inch scales for reducing patterns, and he published also a system of cutting by the use of these scales, but, being impracticable, they have greatly gone out of use.

J. B. West, of New York, constructed another scale for producing patterns from originals, called by him "Combination Geometrical Scales." In using them, he recommends to take "no measure more than the circumference of the breast, length of coat, and length of sleeve," and if any changes are to be made, "to make them by the eye."

G. Beard patented patterns for laying out measurements; Vandoren, a series of jackets; Tierney, a T-square; and besides these, various devices have been invented, by means of which exact patterns of garments are intended to be produced. They being, however,



perfectly unlike to the instrument herein described, we do not deem it necessary to dwell upon their construction or mode of operation.

Only a superficial examination of the various systems of cutting will be sufficient to prove, that although we may possess the accurate widths and lengths measures, no idea can be formed therefrom of the relative position of the various parts of the body. This must entirely be left to the eye of the tailor, which circumstance is considered to be the reason why garments, for which exact measures have been taken, must repeatedly be "tried on."

Let us suppose that the measures of two persons of perfectly the same size (the same fulness of breast, length of waist, &c.,) have been taken; one of them be erect in stature, the other stooping. Will the tailor, from the measures in his possession, be enabled to cut to both fitting garments? This, certainly, is greatly dependent upon chance, and constitutes the so-called "art of cutting."

With respect to the instrument herein described, it

will be seen, that if the same is attached to a person the blade or plummet F will always indicate the true position of the body, or the relation of the thorax to the lower extremities. This position being indicated on paper by the lines referred to, we are enabled to see at once in what proportion "fore part," "skirt," and "back" of the garment are to each other, and are thus enabled to make a costume which will fit closely, in all respects, and retain its shape until worn out.

What we claim, therefore, as our invention, and desire to secure by Letters Patent, is—

The sliding and adjustable blade or plummet F, in combination with the graduated strip or blade A', and the two sliding and adjustable frames C C', in the manner and for the purpose herein described and represented.

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H. KOELLER.

Witnesses:

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