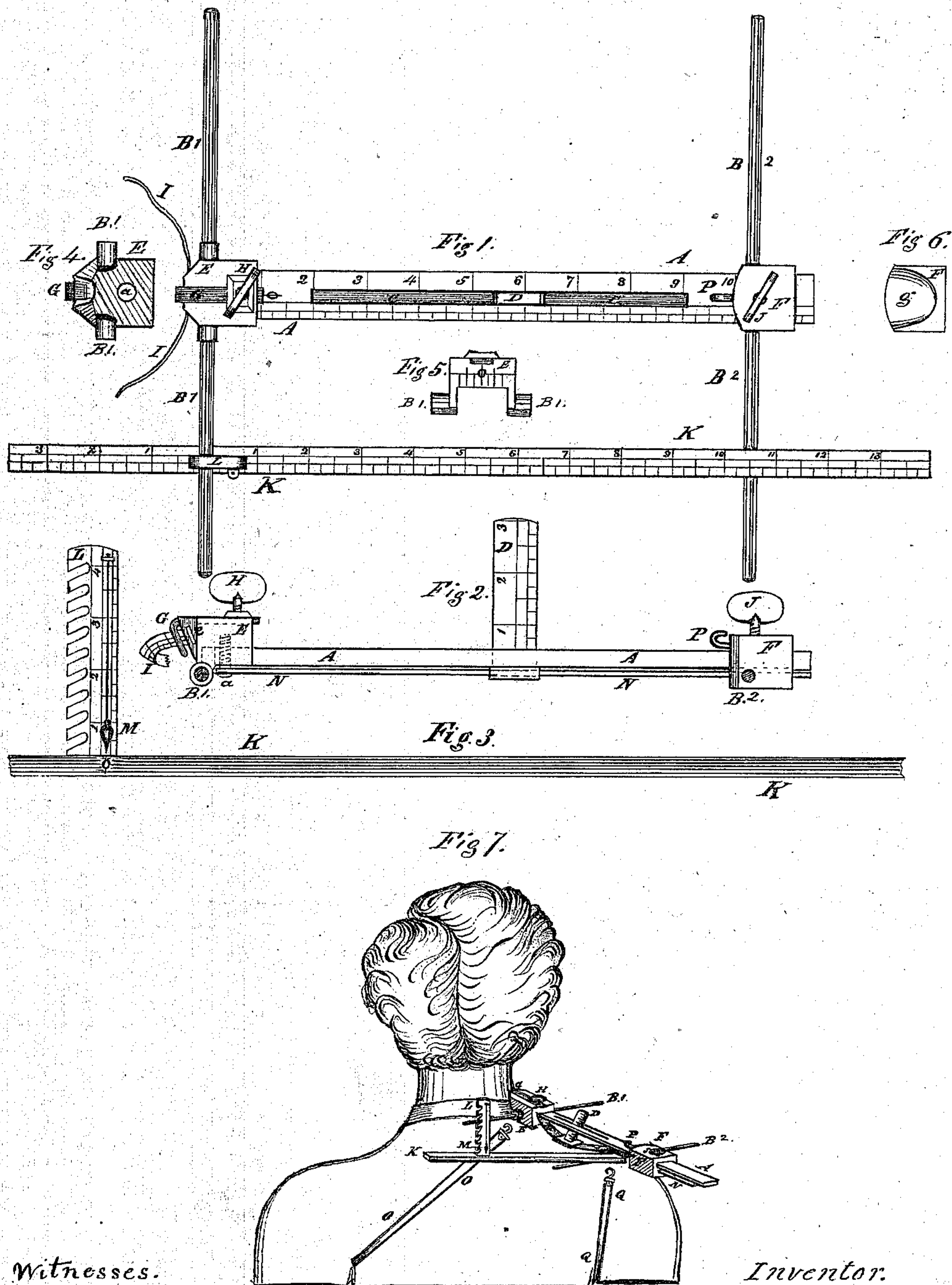


I. DU BOIS.
Improvement in Tailors' Measures.

No. 115,180.

Patented May 23, 1871.



Witnesses.

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IMPROVEMENT IN TAILORS' MEASURES.

Specification forming part of Letters Patent No. 115,180, dated May 23, 1871.

I, ITHAMAR DU BOIS, of Brooklyn, Kings county, State of New York, have invented a Measuring-Instrument for Drafting and Fitting Garments, of which the following is a specification, illustrated by drawing and referred to herein by figures and letters marked thereon.

The object of my invention is to make positive measure of and about the neck and shoulders of the human form, so that the same may be used in the fitting of garments thereto without leaving so much to the judgment of the cutter as has hitherto been the case.

It is well known to those who are practically acquainted with the subject that great difficulty has always existed in fitting garments to this part of the person from the fact that between the highest point of the shoulder-blade, at the base of neck and the crown of the shoulder, at the articulation of the arm, there is both a slope and a curve, which not only vary in different persons, but also in the two shoulders of the same person. This slope is not only downward from the point named—at the base of the neck—but is also forward or backward, in different degrees, from a horizontal line drawn through the neck where the shoulder-blades are connected with it. Again, the shoulders are of different heights in the same individual. It is for the purpose of taking measures of these varying forms and differences that my invention is to be used.

Description of the Drawing.

Figure 1 is a top view of the instrument in all its principal parts.

A A is a graduated bar of ten or twelve inches in length. C C is a slot in the center of A, which allows the traverse of an upright graduated rule, D, seen in side view in Fig. 2, within it. E is a block attached to the end of the rule or bar A, and vibrating on it by means of the pin or screw *a*, as seen in the dotted lines in Fig. 2. B¹ B¹ are metal rods fixed firmly to the block E and at right angles with it, the position of these rods being seen also in the side view of Fig. 2. G is a curved slip or hook of metal moving in a groove cut in the upper face of the block E, and held in position by the screw H. I is a flexible or graduated tape-measure, which passes through the end

of the block E, as seen at *c*, Fig. 2, or otherwise attached to it. F is another block, provided with rods B² B², this block sliding on the bar A and confined at any desirable point by the screw J. K K is another graduated bar, one end of which lies on the rod B² and the other end supported on the rod B¹ by means of a graduated upright, L, seen in side view, Fig. 3, one edge of which is notched or toothed, so that it may be raised or lowered on the rod B¹ until the plumb-rod M, Fig. 3, pointing to the zero-mark 0 on K K, shows that this latter is in a level position. The upright piece D is seen in side view, Fig. 2. It is graduated from its under face, measuring upward.

Fig. 4 shows the under face of the block E, and Fig. 5 shows the rear face of the same, showing graduations each way from a zero-point. This point, when the rods B¹ B¹ are at right angles with A, will be over a like zero-point, seen on it in Fig. 1.

Fig. 6 shows the under side of the sliding block F, *g'* being a hollow which fits on the outer crown of the shoulder.

In Fig. 2 the piece N N, which cannot be seen in Fig. 1, is a thin elastic piece of metal, which may also be graduated on one or both its faces, (same as the bar A,) and is affixed to the block E by the same screw which attaches the bar A. The other end of N slides freely through the block F. The graduated upright D clasps the piece N N, sliding upon it with sufficient friction to remain where it is desirably placed in taking the measure.

P, Figs. 1 and 2, represents a hook attached to the block F, its office being to receive the two clasps or hooks of an elastic strap, Q, to be seen in Fig. 7, and will be further described.

It is to be remarked, and will be seen from inspection of the drawing, that B¹ B¹ are so placed in the block E that when its beveled face, as seen in Fig. 2, is brought up closely to the neck these rods shall represent the point of junction between the highest point of the shoulder-blade and the neck, the shoulder-blade lying between the sockets in which the rods B¹ B¹ are inserted. It will also be noticed in Fig. 4 that the point of the block E, where it comes against the neck, is slightly curved so as to facilitate the close fitting of this block to the neck.

Fig. 7 will show the method of applying and using the instrument and the operation of the various parts. The hook G is slipped on the band of the shirt and the block E placed firmly upon the highest point of the shoulder at the neck, the shoulder-blade lying between the sockets which hold the rods B¹ B¹, care being taken that the under side of the instrument lies closely upon the shoulder. The hook G is then fastened by the screw H. An elastic strap, O O, provided with a hook at each end is passed under the arm opposite to the side where the measure is being taken and hooked to the neck of the screw H. This confines the instrument closely to the neck and shoulder at this point. The sliding block F is then accurately adjusted, with its hollow directly on the outer crown of the shoulder, and secured by the screw J. Another elastic strap, Q, made in the same manner as O O, is passed directly under this arm and hooked to P, so that the instrument is now confined at both of the highest points of the shoulder. The rule K K is laid on the rod B² at one end, and the other attached to the rod B¹, and moved up and down upon it by means of the toothed upright L till the plumb-bob M, by pointing at the zero-mark, denotes that the rule L is level. The flexible or tape measure is then passed around the neck, determining its size. The upright piece D is then moved in the slot in the rule A and along the elastic rule N N until it is directly over that part of the shoulder which is most curved or hollowed out. D is then pressed downward till the rule N lies along this curve, and the graduation of D at its intersection with the under face of the bar A is noted, as also the position of D on the graduations of A. A record also is made of the graduations on the rear of the block E in their relations to the zero-point 0 on bar A. The length of the line from the rod B¹ to the block F is indicated on the graduations of the bar A; the length of the line from the crown of the shoulder to the junction of the base of the neck and shoulder-blade is given on the rule K K, counting its graduations from its upright L to the point where it lies upon and intersects the rod B²; and the height of the line from the lower face of the rule K K to the base of the neck is given by the graduations on the upright L to where it is attached to the rod B¹. To sum up, I have (taking the junction of the

shoulder-blade as the starting-point) the measures in a right line from the base of the neck to the crown of the shoulder, the depth and position on this line of the curve between the two points named, the length of the base-line on a level from the crown of the shoulder to where the slope of the back commences toward the base of the neck, and the height of this slope from the base-line to the base of the neck, as well, also, the size of the neck and the angle of the pitch of the shoulder, either forward or backward, of the point where the shoulder-blade meets the base of the neck. The instrument applied to the other shoulder in the same manner and the measurements noted and compared with those first taken will show the difference between them, and the garment be drafted to meet these differences.

I have described that form and construction of the instrument which I consider best, but it is obvious that changes of the detail can be made without varying the principle; for instance, a level on the rule K K may be substituted for the plumb-bob, and a level may be placed transversely on the bar A or the block F to secure the horizontal position of the rods B¹ and B², and the notched upright may be attached by a slide and graduating-screw to the rod B¹; but in practice I have found the form described to be simple, effective, and easily managed.

I do not claim, broadly, the taking measurement of the human form by means of graduated rules, nor the use of a plumb line or level in connection therewith, as in various forms they have been used many years; but

What I do claim as novel and useful is—

1. The vibrating block E and the sliding block F, provided, respectively, with the rods B¹ B¹ and B² B², in combination with the slotted rule or graduated bar A, the elastic piece N, and upright rule D.
2. The rule K, with its toothed graduated upright rule L, combined with the plumb line and bob M, and with the blocks E and F and rods B¹ and B², the upper rule D, and elastic rule N, all made and operating substantially as set forth and described, or their mechanical equivalents.

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Witnesses:

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