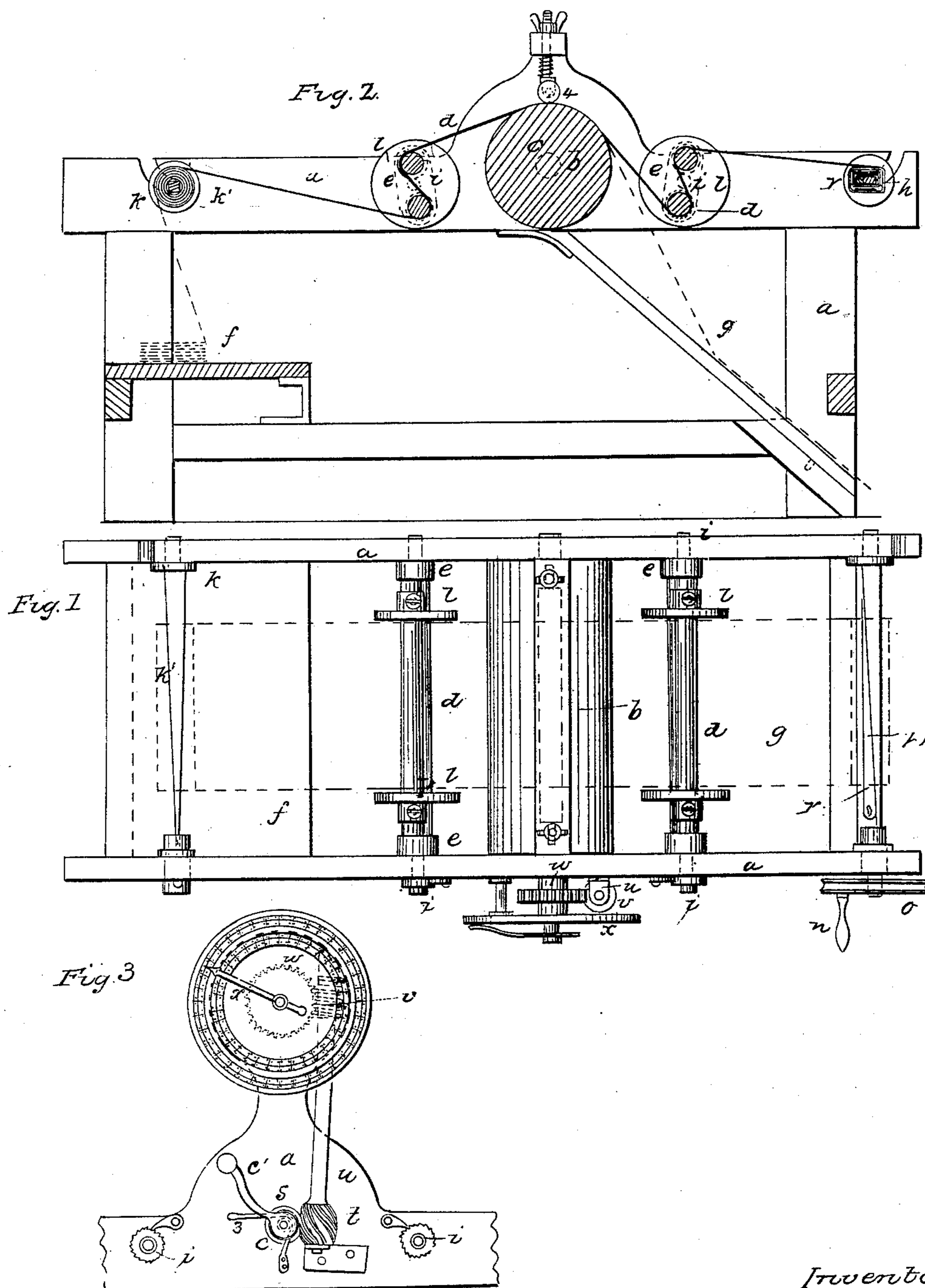


W. HEBDON.
Cloth Measurer.

No. 90,262.

Patented May 18, 1869.



Witnesses
Chas. H. Smith
Geo. D. Walker

Inventor
William Heddon
per L. W. Serrell
Atty

UNITED STATES PATENT OFFICE.

WILLIAM HEBDON, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, CHARLES H. F. AHRENS, AND CHARLES S. BALDWIN, OF SAME PLACE.

IMPROVEMENT IN CLOTH-MEASURING MACHINES.

Specification forming part of Letters Patent No. 90,262, dated May 18, 1869.

To all whom it may concern:

Be it known that I, WILLIAM HEBDON, of the city and State of New York, formerly of Leeds, England, have invented, made, and applied to use a certain new and useful Improvement in Machines for Measuring Cloth, Carpets, &c.; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a plan of said machine. Fig. 2 is a vertical section, and Fig. 3 is an elevation, of the dial and its actuating mechanism.

Similar marks of reference denote the same parts.

The object of this invention is to accurately measure cloth and other fabrics and wind them with regularity and the proper tension, or deliver them in a condition to be folded.

My invention consists in a measuring-roller covered with plush or other similar material, to which material to be measured is pressed by a spring-roller, in combination with a registering-dial and with mechanism for guiding the fabric to the measuring-roller and applying to the same the requisite tension.

In the drawing, *a a* are frames of suitable size and shape. *b* is the measuring-roller, covered with plush or similar material to insure the adhesion of the fabric. This roller is to be thirty-six inches in circumference, or other standard of measure, and of a suitable length for the width of the fabric. The shaft *c* of this roller *b* extends through the frame, and is provided with a crank, *c'*. The spring-roller 4 is applied to hold the material in contact with the surface of the roller *b*. On each side of the roller *b* is the tension regulator and guide. Each of these is formed of two rods, *d d*, between heads *e e*, that are provided with central studs or journals *i*, passing through the frames *a a*, and a ratchet and pawl applied to the shaft *i* holds the bars or rods *d d* of the tension apparatus in whatever position they may be placed, to cause the fabric to be wound around them more or less, and thereby regulate the tension upon the fabric as it passes to the measuring-cylinder or as it goes from that to the winding-roller.

If the fabric is in a folded condition, it is to be laid upon the table *f* and pass up over a roller, *k*. If it is in the form of a roll, the tapering spike *k'* is to be thrust through the same, so as to form a support and allow it to unroll.

The movable guides *l*, applied to the bars *d d*, can be adjusted to the width of the fabric and held by a clamping-screw, so as to keep the fabric correctly in position.

When the fabric is not to be rolled up, it is allowed to pass down the incline *g* as it is delivered. When it is to be rolled up, the tapering roller *h* is employed, rotated by a crank, *n*, or by power applied to the wheel *o*; and in case the fabric is to be wound, the measuring-drum *b* will be turned by the cloth itself, instead of the crank *c'*. Introduce the tapering spit *r* at the side of the tapering winding-roller *h*, so as to make its sides parallel, or nearly so, and insure even winding, and by pulling this spit *r* out of the roll when removed from the machine the winding-roller is left free to be withdrawn. Upon the shaft *c* is a screw-pinion, *s*, having several inclined threads or blades at an angle of about forty-five degrees, and these take into a similar pinion, *t*, on the shaft *u*, so that said shaft *u* will turn the same number of times as the shaft *c*, or a given proportion thereto, and the movement will be smooth and free from looseness in the screw-gears, and at the upper end of the shaft *u* is a worm-pinion, *v*, gearing into the dial-wheel *w*.

x is the dial, in front of which is a hand upon the arbor of *w*. The divisions of the dial *x* indicate the number of yards measured by the roller or drum *b*, and I prefer that two rows of figures be employed, in order that the computation may be denoted upon the second rotation of the hand, instead of requiring the addition of the amount indicated by the first revolution of the dial.

In measuring fabrics, such as cloth, it is usual to compute the yard as thirty-seven inches in selling at wholesale. I have therefore shown two inner ranges of divisions and figures to indicate this difference, seventy yards at thirty-seven inches almost equaling seventy-two yards at thirty-six inches.

A friction-lever, 3, may be applied, as seen in Fig. 3, to the shafts of the roller *b*, so as to

stop the momentum and prevent any movement after the end of the fabric has been drawn out from between the roller *b* and pressure-roller 4.

What I claim, and desire to secure by Letters Patent, is—

The tension-regulator *d d*, constructed as specified, in combination with the measuring-cylinder *b* and roller 4, whereby the cloth will be guided as it passes along and the proper

tension applied thereto, substantially as set forth.

In witness whereof I have hereunto set my signature this 28th day of September, A. D. 1868.

W. HEBDON.

Witnesses:

CHAS. H. SMITH,
GEO. T. PINCKNEY.