C. M. SWANY.

Cloth Measure.

No. 40,962. Patented Dec. 15, 1863.

Fig. 1.

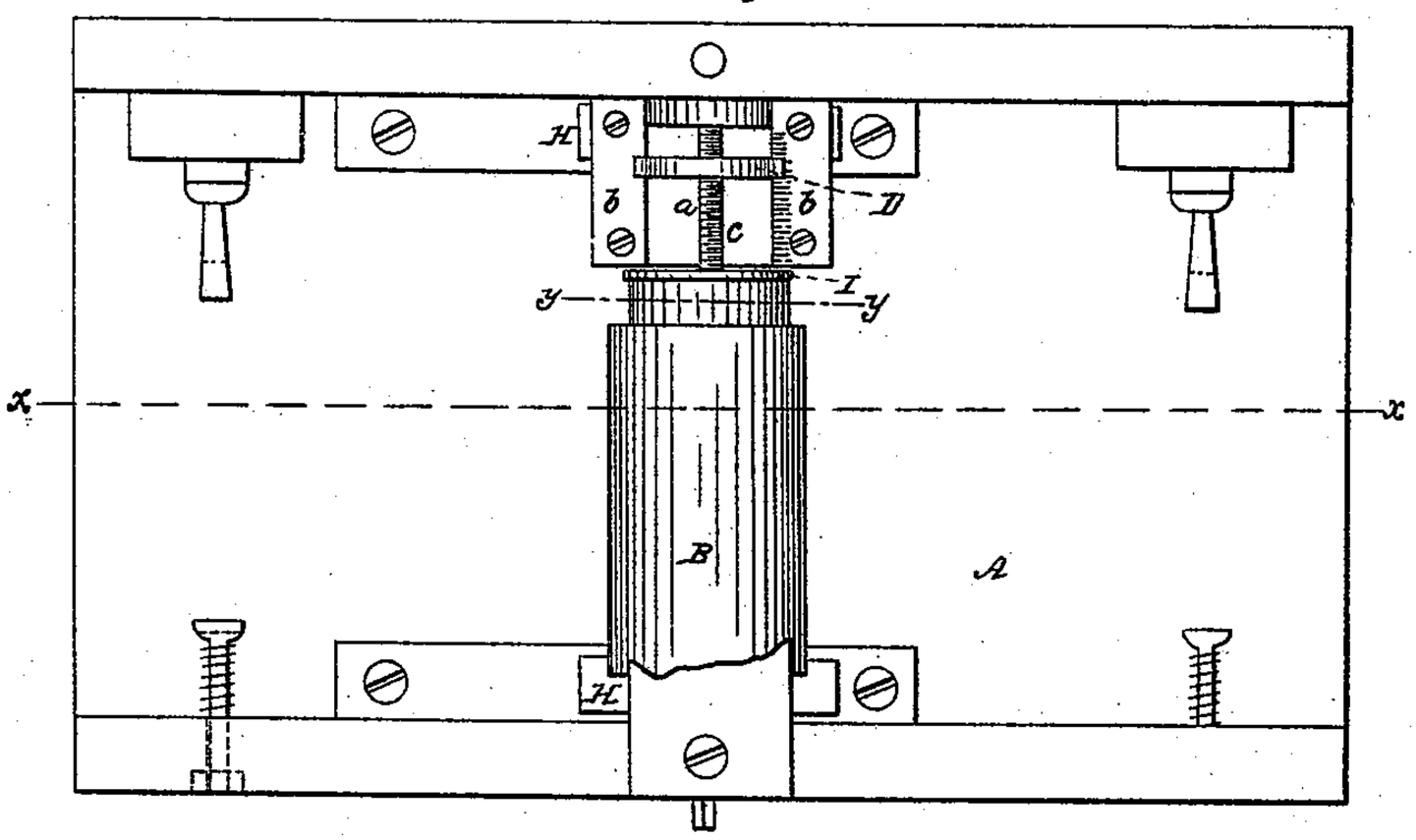


Fig. 2.

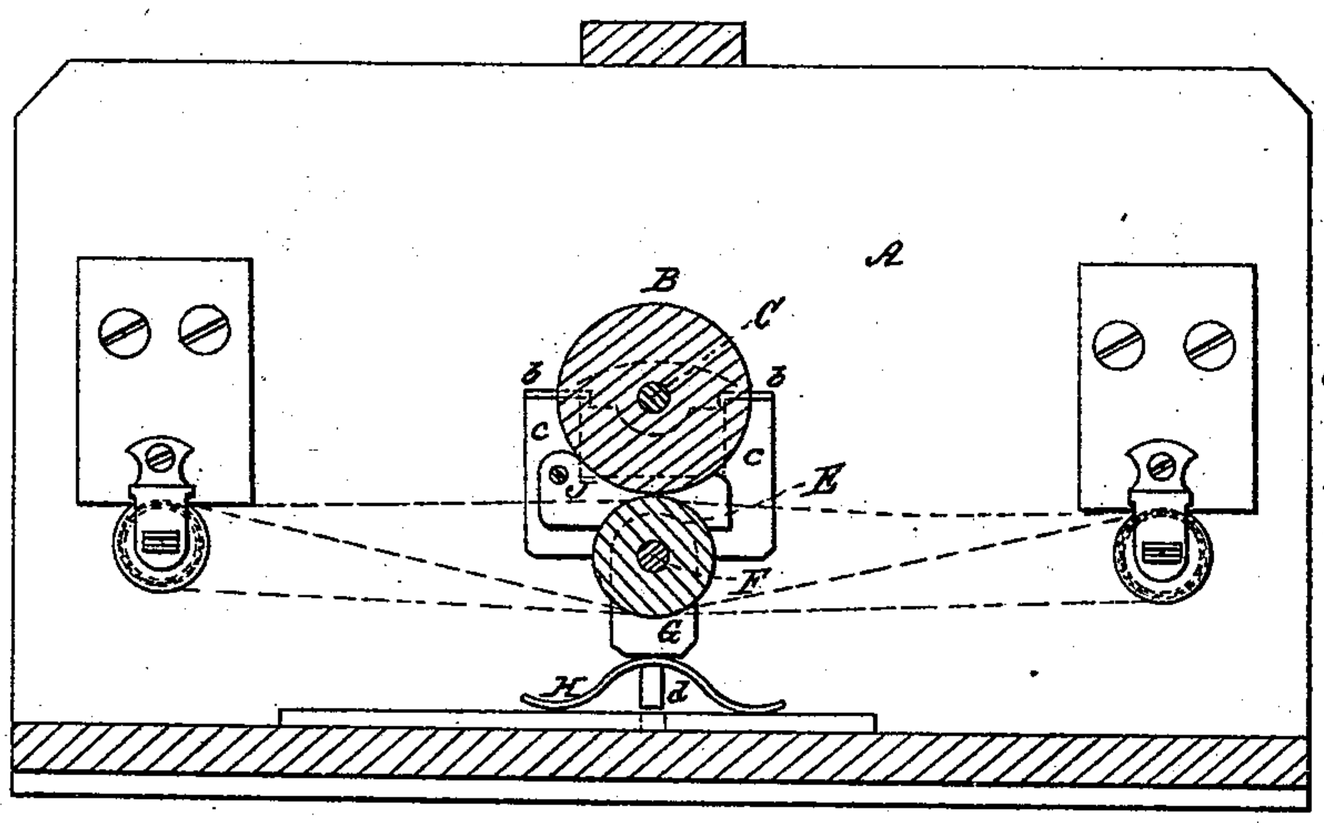
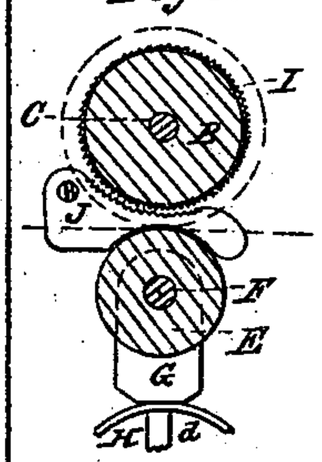


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES M. SWANY; OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR MEASURING CLOTH.

Specification forming part of Letters Patent No. **40,962**, dated December 15, 1863.

To all whom it may concern:

Be it known that I, CHARLES M. SWANY, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Machine for Measuring Cloth; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a longitudinal vertical section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a section, taken in the line, *y' y'*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the employment or use of a drum provided with a screw-shaft and nut, and also with a ratchet, in connection with a pressure-roller, lever, and a graduated plate, all being arranged in such a manner and in such relation with two drums or shafts, from one of which the cloth is unwound and upon the other of which it is wound, that the desired work may be done in an expeditious and accurate manner.

A represents a rectangular box, at about the center of which there is placed transversely a drum, B, the shaft C of which works in fixed bearings. This shaft C projects a considerable distance beyond one end of the drum B, and it has a screw, *a*, cut upon it, on which a nut, D, is fitted, the ends of said nut resting on two parallel guide-plates, *b b*, which are attached to supports *c c*, the latter projecting horizontally from the inner side of the box A. One or both of these plates *b b* are graduated into degrees indicating through the medium of the nut D the number of revolutions of the drum, and the fractional parts of a revolution. It is designed to have the drum B a yard in circumference. Directly below the drum B there is a roller, E, the shaft F of which has its bearings in slides G G, which are fitted or work on vertical guides *d d*, attached to the surfaces of the sides of the box A. Underneath each slide G there is placed a spring, H, and these springs have a tendency to keep the roller E pressed upward against the drum B, as will be understood by referring to Fig. 2. On the end of the drum B, from which the screw portion of the shaft C projects, there is fitted a racthet or milled-wheel, I, underneath which there is a lever or pawl, J, which is connected to one of the supports, C. This lever rests on the roller E, and said lever or pawl is made concave both at its upper and lower edges, to suit respectively the ratchet I and roller E.

The operation is as follows: The cloth to be measured (shown in red) is placed on a reel or shaft at either end of the box A, and the cloth is passed between the drum B and the roller E, and is wound upon a reel or shaft at the opposite end of the box A, motion being communicated between the two reels by a belt. The drum B is rotated by any convenient power, and the cloth thereby moved below it, and the revolutions of the drum B are recorded by the nut D on the graduate plates *b b*. When the cloth is between the drum B and roller E, the lever J is free from the ratchet or milled wheel I, but as soon as the cloth has passed from between them the springs H force up the roller E in contact with the drum B, and the lever J, in consequence of resting on the roller E, is brought in contact with the ratchet or milled wheel I, and the rotation of the drum B instantly stopped, so that the exact measurement of the cloth will be obtained.

The whole arrangement is exceedingly simple, may be manufactured at a small cost, and will perform its work or measure the cloth accurately.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The drum B, provided with the screw-shaft C and nut D, in combination with the graduated plates *b b*, one or both, pressure-roller E, and the lever or pawl J, and ratchet or milled wheel I, or their equivalents, all arranged to operate substantially as and for the purpose herein set forth.

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Witnesses:

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