W. D. PORTER.

CLOTH-MEASURING MACHINES.

No. 194,462. Patented Aug. 21, 1877.

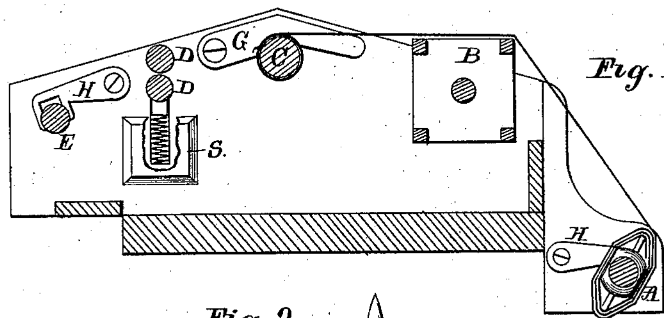


Fig. 1.

Fig. 2.

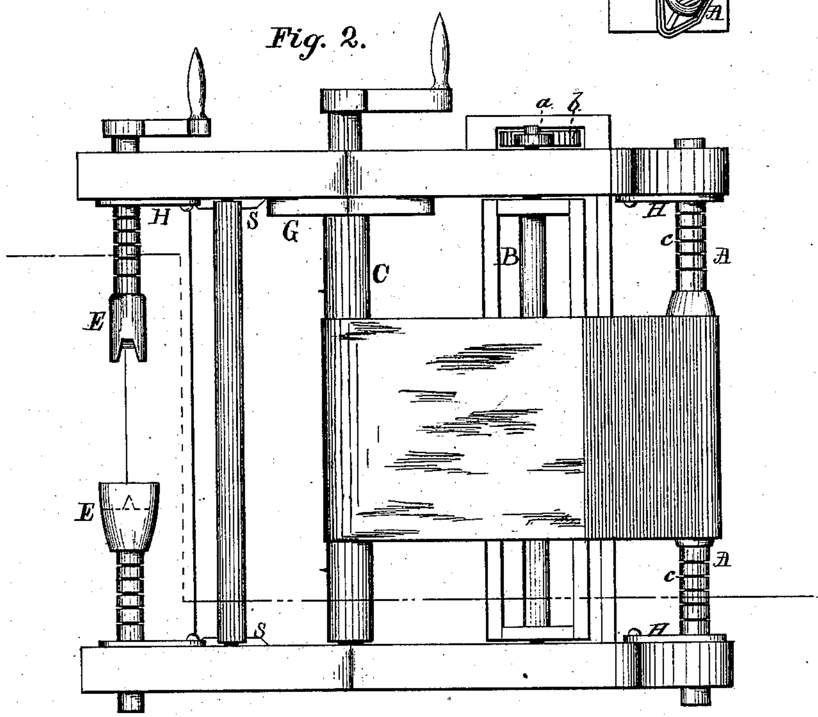
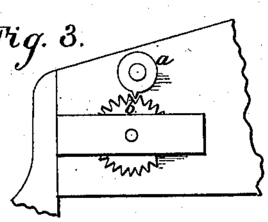


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM D. PORTER, OF McCOMB, OHIO.

IMPROVEMENT IN CLOTH-MEASURING MACHINES.

Specification forming part of Letters Patent No. **194,462**, dated August 21, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that I, WILLIAM D. PORTER, of McComb, in the county of Hancock and State of Ohio, have invented a new and Improved Cloth-Measuring Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to a machine or apparatus in which cloth or other kind of fabric can be measured while being wound upon a roller. The board forming the center of a bolt of cloth or other fabric is clamped endwise between two aligned and axially-adjustable rotary shafts, and as the cloth unwinds it passes over a reel, by which its length is measured, and is wound upon a roller arranged parallel to the reel. In being unwound from said roller it passes between two rolls and is thereby pressed and smoothed before being rewound upon the board.

The invention consists in locking the aligned shafts between which the bolt is clamped by means of pivoted dogs or notched plates, which take into circumferential grooves in the shafts.

The details of construction and arrangement of parts will be understood upon reference to the drawing accompanying this specification, in which—

Figure 1 is a vertical elevation, and Fig. 2 a plan view, of the apparatus. Fig. 3 is a detail view of the tally device.

In Figs. 1 and 2 cloth or other fabric is represented as being unwound from its board, which is held between the inner ends of two aligned shafts, A A, and as being rewound upon the crank-roller C, passing intermediately over the reel B. The latter is rotated by friction with the cloth or fabric, and is square in cross-section, the several sides having a certain width, so that, the number of rotations of the reel being known, the length of cloth or other fabric measured may be accurately determined. The number of rotations is measured by means of the finger-disk *a*, fixed on the journal of reel B, and a notched or toothed tally-wheel, *b*, Fig. 3, with which the finger of said disk engages, and which it moves the width of one of its teeth each time the reel makes a complete rotation.

The width of cloth or fabric varies, and it is hence requisite the shafts A A shall be axially adjustable in order to enable them to clamp and hold the boards of different lengths on which the cloth or fabric is wound. The shafts A A are, therefore, adapted to slide in their bearings, and may be locked in any adjustment by means of the catches H, which are pivoted to the frame of the machine, and whose notched or slotted ends enter circumferential grooves *c* in said shafts, as shown in Fig. 2.

The devices employed for rewinding the cloth upon the board from which it has been thus unwound consist of the pressing and smoothing rolls D D and shafts E E, which latter are constructed, arranged, adjusted, and operated precisely like shafts A A, above described, and also locked by dogs or catches in the same manner. The pressure of the rolls D may be graduated by springs S.

In case the cloth is being wound too loosely upon the board the tension may be increased by pressure applied to the brake or friction-lever G, which acts upon the central crank-roller C.

What I claim is—

In a cloth-measuring apparatus, the combination of detachable, notched, or slotted catches with the circumferentially-grooved and axially-adjustable shafts for holding the bolt, substantially as shown and described.

WILLIAM D. PORTER.

Witnesses:

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