(No Model.) 2 Sheets—Sheet 1.

C. C. & J. R. HENDERSON.

CLOTH MEASURING MACHINE.

No. 274,768. Patented Mar. 27, 1883.

Fig. 1.

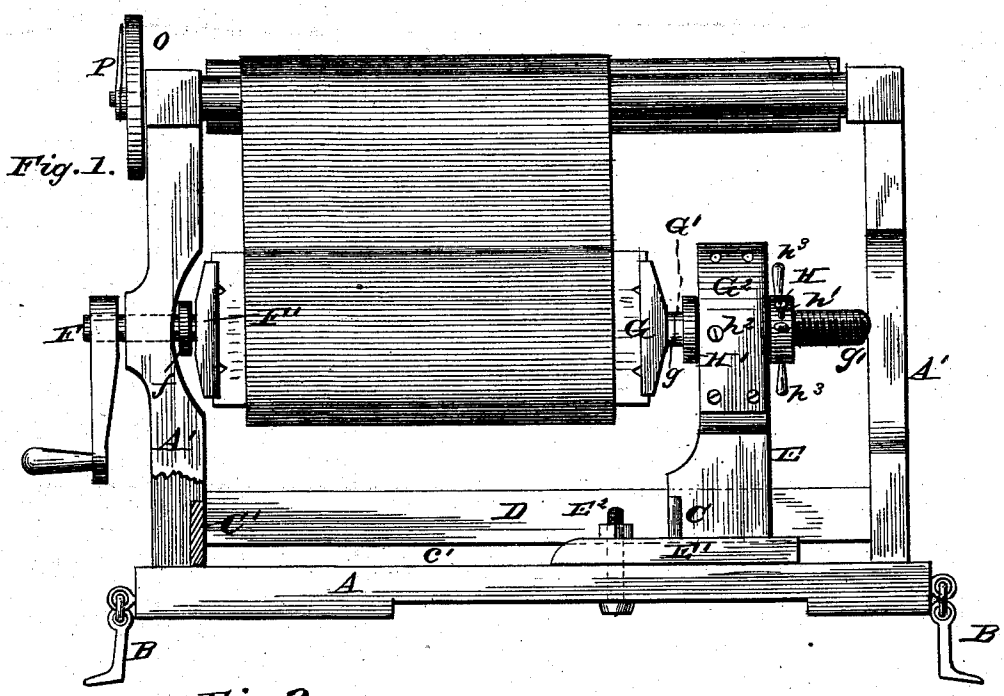
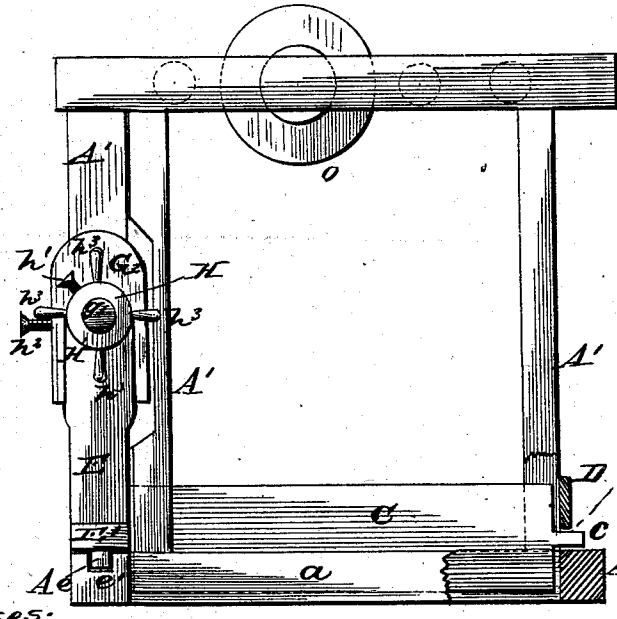


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

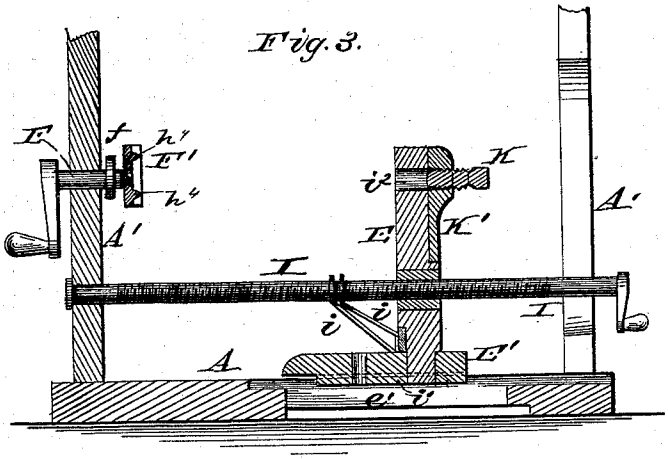


Fig. 4.

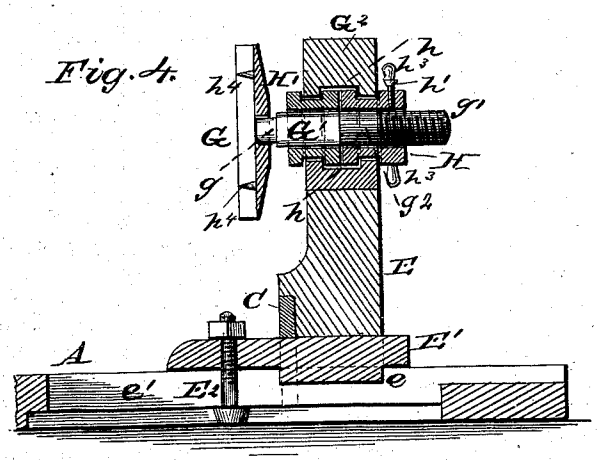


Fig. 5.

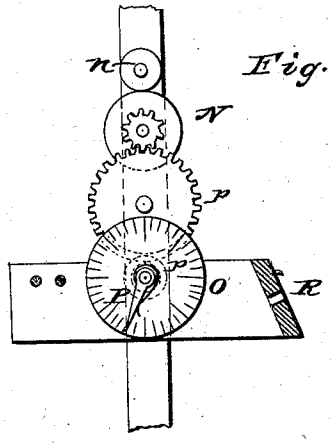


Fig. 6.

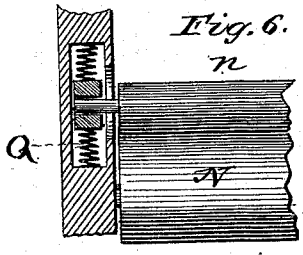
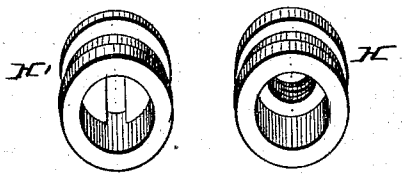
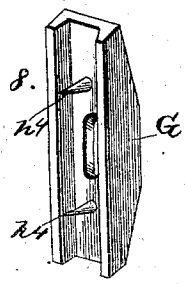


Fig. 7.



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Fig. 8.



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by Audrain & Smith
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N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES C. HENDERSON AND JACOB R. HENDERSON, OF ARKADELPHIA, ARKANSAS.

CLOTH-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 274,768, dated March 27, 1883.

Application filed July 22, 1882. (No model.)

To all whom it may concern:

Be it known that we, C. C. HENDERSON and J. R. HENDERSON, citizens of the United States, and residents of Arkadelphia, in the county of Clark and State of Arkansas, have invented a new and valuable Improvement in Cloth-Measuring Machines; 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side view of our device, and Fig. 2 is an end view of the same. Figs. 3 and 4 are vertical sectional views of parts of the machine. Fig. 5 is a detached view of the registering-gear, and Figs. 6, 7, and 8 are detail views.

This invention has relation to cloth-measuring machines; and it consists in the novel construction and arrangement of parts, as will be hereinafter fully described and claimed.

The frame of this machine comprises a rectangular base composed of two horizontal bars or sills, A, connected together by cross-bars *a*, and a rectangular top, which is also composed of four bars and supported by standards A′, rising from the base. This frame is adapted to be placed upon a table or store-counter, and is provided at its ends with suitable clamps, B, for engaging the edges of the counter or table, so as to hold the frame down while the cloth is being unrolled from the bolt, which is simply laid upon the table or counter between the bars composing the base of the frame.

To prevent the bolt from shifting endwise while the cloth is being unwound therefrom, we provide two foot-boards, C and C′, the former of which is capable of lateral adjustment, while the latter is rigid with the frame at one of its ends. The movable foot-board C has at one end a stud or tenon, *c*, which is supported and guided in a horizontal slot or way, *c′*, formed between a board, D, and one of the sills A, while the opposite end of the foot-board is secured to a standard, E, that is adjustably held upon the opposite sill. To adjust this standard so as to vary the distance between the two boards according to the length of the bolt, the standard E is secured and braced upon a horizontal base, E′, provided upon its under side with a rib, *e*, which is received in a slot, *e′*, in the sill, so that the said base and standard can be moved along the sill as required. A set-screw, E^2, passes through the slot and the base portion of the standard, in order to afford means for securing the standard in its adjustment. A rotary spindle, F, is supported in one of the standards of the frame and provided at its outer end with a crank-handle. A grooved clamp-block, F′, is secured to the inner end of this spindle, and a washer, *f*, is fitted upon the spindle, so as to form an extended backing for the clamp. The opposite grooved clamp-block G is secured upon the flat inner end, *g*, of a spindle, G′, which is supported in a box, G^2, at the upper end of the adjustable standard E. The spindle G′ has a screw-threaded outer end, *g′*, and a middle cylindrical portion, g^2. Two double-flanged spools, H H′, are fitted upon this spindle, the spool H being internally screw-threaded and arranged upon the screw-threaded end of the spindle. The spool H′, however, has a portion of its bore made cylindrical to receive the middle cylindrical portion of the spindle, while the remaining portion of the opening through said spool is made in the form to receive the flat part of the spindle, and thereby cause the said spool and spindle to rotate together. The box G^2 has an internal annular groove, *h*, which receives one of the flanges of each spool, the remaining outer flanges of the spools being outside of the box. A set-screw, *h′*, passes through the outer flange of the spool H, so as to lock it upon the spindle, and a stop-pin or set-screw, h^2, passes through the box, so as to engage the spool H′ when it is necessary to prevent the spindle from rotating. The object of this arrangement of devices is to allow the spindle to a have either a rotary or an endwise movement, the former being required while the cloth is wound upon a board or stick held between the clamps, and the latter movement being desirable when the stick or board is shorter than the width of the cloth and it becomes necessary to project the spindle forward, so that its end carrying the

clamp shall be extended in the roll that is being formed upon the board or stick. Thus, to move the spindle endwise in either direction, the screw or pin passing through the box will be brought into engagement with the spool H′, so as to hold the same, and thereby prevent the spindle from rotating, it being understood that while the spindle can slide through the spool H′ it cannot rotate independently of the same. The set-screw carried by the spool H will be loosened, and said spool turned upon the screw-threaded portion of the spindle, thereby causing the spindle to move in the direction of its length.

In order to operate the spool H conveniently it will be provided with several radial handles or knobs h^3 upon its outer flange. When, however, cloth is to be wound upon a board or stick held by the clamps, the set-screw or stop-pin holding spool H′ will be released from the same and the spool H locked upon the spindle by tightening up the set-screw carried by said spool. In this way, when the crank-handle is operated, the two spindles and the board or stick clamped between them will be rotated, and the two spools will turn with the spindle, upon which they are fitted. The clamps are detachably secured to the inner ends of the spindles in any suitable way—as, for example, by screws—and each clamp is provided in its grooved face with two or more pins, h^4, which enter the ends of the board or stick upon which the cloth is to be wound. The grooved form of clamp is especially applicable for holding a flat board or stick; but when a cylindrical stick or roller is used to wind cloth upon, plane-faced clamps having several pins can be substituted.

The movable standard hereinbefore described is adjusted upon the sill of the frame directly by hand, the standard being moved back or forth as required. In Fig. 3 the standard is moved by a screw-threaded rod, I, which is turned by hand so as to adjust the standard. This horizontal screw-threaded rod works in a screw-threaded bearing in the standard, and has one of its ends arranged to work in a bearing in one of the fixed standards of the main frame of the machine, the opposite end of said rod being provided with a suitable handle. This rod also passes through the upper ends of a pair of braces, *i*, one of which is secured to the movable standard and the other to the foot-board. In this instance the set-screw is dispensed with and a dovetailed rib, *i′*, which is formed or secured upon the under side of the horizontal base of the standard, is received in a dovetailed groove in the sill of the main frame.

It will also be observed that, in lieu of the spools and adjustable spindles, the standard has a round opening, i^2, formed through it, and that a set-screw, K, passes through a metal plate, K′, attached to the standard, and enters said opening. This construction is only serviceable where the cloth is wound upon a round or square stick, which latter is inserted in the opening in the standard and the set-screw tightened up against the end of the stick.

After the foot-board has been adjusted and the movable standard secured in place, it may happen that further adjustment of the board becomes necessary as the cloth unwinds from the bolt. We have therefore devised an auxiliary foot-board connected to the main foot-board and having an adjustment independent of the same by means of set-screws or other suitable means. In this way the auxiliary foot-board can be adjusted without moving the standard, and while the machine is in operation.

It is proposed in this machine to employ the principal operative parts of the machine secured to us by the Letters Patent numbered 242,642, and bearing date June 7, 1881, these parts being, however, subject to slight modifications, which will now be explained.

We propose employing either the toothed cylinder or a cylinder with a presser-roll journaled alongside of the same, it being obvious that in either case the cylinder will rotate as the cloth from the bolt passes over it. In Fig. 5, N indicates the cylinder, and *n* the presser-roll. We also employ the dial O and pointer P, arranged upon an arbor having a gear, *p*, which is driven from the shaft of cylinder N by means of a suitable train of gearing. In said patent the dial can be turned so as to bring its zero-point opposite the pointer, which is fixed upon its arbor; but in the present instance the pointer is arranged loosely upon the arbor, and caused to turn therewith by means of a spring, Q, which bears against the pointer, and is secured either to the arbor or to a washer or collar fixed thereon. We also propose employing the slotted cutting-board R, described in said patent. These devices, which are shown in our former patent and which will be employed in the present machine, can be supported on the frame herein illustrated; or additional brackets or standards can be used. As they are not claimed, however, in this application, and as their proper relative position and operation will be readily understood from the said patent, the detail illustration and above brief mention of said devices are regarded as sufficient.

In conclusion, we may add that either the arrangement of tension-rollers shown in said patent or any other suitable arrangement of tension-rollers can be employed in this machine.

An adjustable chuck journaled in an adjustable frame is not new, and is not broadly claimed herein.

Having thus described our invention, what we claim is—

1. In a cloth-measuring machine, the combination, with the vertically-slotted sill A, of the standard E, having the horizontal base E′, provided on its under side with the rib *e*, the securing-bolt, and the foot-board C, having the tenon *c*, substantially as specified.

2. The combination, with the foot-board C, of the adjustable standard, and the screw-rod passing through the standard and adapted to move the same, in the manner described.

3. The combination, with the spindle G′, of the two double-flanged spools and their respective locking devices, said spindle being capable of both a rotary and an endwise movement, substantially as described.

4. The combination, with the rotary spindle G′, having one flat and one screw-threaded end, with the double-flanged spool H fitted on its screw-threaded end and the double-flanged spool H′ fitted upon its flat end, the devices for locking one of said spools upon the spindle and for holding the remaining spool in rigid connection with the box, having an internal annular groove in which the flanges at the inner ends of the spools are located, whereby the spindle can be either allowed to rotate or be held against rotation and adjusted in the direction of its length, substantially as described.

5. The combination, with the foot-board C, of the adjustable standard E, supported on a slotted sill of the frame, and the set-screw E^2, for holding the standard to its adjustment, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

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JACOB R. HENDERSON.

Witnesses:
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GEORGE H. LOCKE.