



# UNITED STATES PATENT OFFICE.

HENRY MINISTER, OF ZALESKI, OHIO.

## CLOTH-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 527,617, dated October 16, 1894.

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*To all whom it may concern:*

Be it known that I, HENRY MINISTER, a citizen of the United States, residing at Zaleski, in the county of Vinton and State of Ohio, have invented a certain new and useful Improvement in Goods Displaying and Measuring Devices, of which the following is a specification.

My invention relates to the improvement of devices for invoicing, measuring and displaying dry-goods or other fabrics which are wound in the form of bolts.

The objects of my invention are to provide a device of this kind in which is combined improved adjustable means for supporting a bolt of goods and temporarily converting the same into a reel; to combine therewith means for measuring goods from bolts and to produce other improvements which will be more specifically pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved device showing for the sake of clearness in illustration a portion of a goods bolt core or winding piece therein. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is an end view. Fig. 4 is a detail view in perspective of one of the bolt holding claws and Fig. 5 is a detail sectional view taken on line 5—5 of Fig. 1.

Similar letters refer to similar parts throughout the several views.

In the construction of my device, I employ a suitable oblong base plate *a* arranged horizontally as shown. Adjacent to the longer edges of this base plate I provide upwardly projecting angular guide pieces *a'*, the upper edges of the latter being turned inwardly to form longitudinal flanges *a<sup>2</sup>*. These guide strips may extend throughout the length of the base plate, but as indicated in the drawings, preferably extend only from what I shall term the outer end thereof to a point past the center thereof. Rising from the inner end of the base plate *a* is a standard *b* while from said base plate between the side guide pieces *a'* rises a similar standard *c*, said standard *c* having a movable support on said base as hereinafter described. With the lower end of the standard *c* and on opposite sides thereof are formed parallel arms *c'* which pro-

ject, as shown, in the direction of the standard *b* and in the same plane with the base *a*. The end portions of these arms *c'* have journaled on their outer sides small wheels or rollers *c<sup>2</sup>* which as indicated in the drawings are adapted to bear and travel between the under sides of the guide flanges *a<sup>2</sup>* and the base *a*. On opposite sides of the lower portion of the standard body *c* are likewise pivoted or journaled bearing wheels or rollers *c<sup>3</sup>* which correspond with the wheels *c<sup>2</sup>* above mentioned. By means of the track rails thus provided for the standard *c*, the latter may in the manner hereinafter described be made to travel longitudinally upon the base *a*.

From the central and upper end portion of the standard *c*, I cause to project inwardly a pin *d* and surrounding the inwardly projecting portion of the latter adjacent to said standard is a cup shaped boxing *d'*. On the outer side of this boxing is journaled the central portion of a horizontal claw arm *d<sup>2</sup>*, the inner side of said claw arm having a bearing as indicated against a set of bearing balls *d<sup>3</sup>*, which are arranged within the boxing *d'* and about the pin *d*. The claw *d<sup>2</sup>* is provided, as shown, with a central depending counterbalance or tongue *d<sup>4</sup>* which serves, as shown, to support said portion *d<sup>2</sup>* normally in a horizontal position. This horizontal portion *d<sup>2</sup>* is provided as indicated with outwardly projecting claw or teeth terminations *d<sup>5</sup>*. Upon the inner face of the end standard *b* and near the top thereof is similarly journaled a clamping piece or claw *e* which corresponds in arrangement and construction with the claw *d<sup>2</sup>*.

The standards *c* and *b* are, as shown, adjustably connected by means of coil springs *e'* which extend between said parts and normally retain the standard *c* between the inner end portions of the guide pieces *a'*.

Rising and inclining rearwardly from the rear portions of the base ends are frame pieces *f* and journaled between the upper end portions of said frame pieces *f* is a feed roller *f'*. Above the ends of this feed roller are pivoted to said frame pieces *f* the inner ends of outwardly extending arms *f<sup>2</sup>*, the outer ends of which are connected by a rod *f<sup>3</sup>*. Between the bars *f<sup>2</sup>* and at points adjacent to the inner ends thereof are journaled the bearing ends of a friction or pressure roller *f<sup>4</sup>*, the

periphery of which is normally in contact with the periphery of the roller  $f'$ . On one of the outer ends or standards of the roller  $f'$  is carried a small pinion wheel  $g$  and journaled beneath this pinion wheel and on the outer side of one of the frame pieces  $f$  is a gear wheel  $g'$ . This gear wheel has on one of its spokes or face an outwardly projecting pin  $g^2$ . On one side of the wheel  $g'$  is journaled a somewhat larger gear wheel  $h$  which is supported outside of the wheel  $g'$  and adapted to partially overlap the latter. The pin  $g^2$  carried by the wheel  $g'$  is so located as to come into contact with one tooth of the wheel  $h$  and thereby move the latter a distance equal to the width of one tooth at each complete rotation of the wheel  $g'$ . In the construction of these wheels I preferably so size the same as to cause the pinion  $g$  to make four revolutions while the wheel  $g'$  is making one complete revolution. The circumference of the wheel  $g'$  is divided into four equal parts as indicated on the face thereof by Figs. 1, 2, 3 and 4. As indicated at  $i^2$  I may provide one of the frame pieces  $f$  with a projecting arm having a short spring tongue  $i^3$ .

The size of the roller  $f'$  is such that one complete revolution of the same caused by frictional contact of the goods will result in one-fourth of a yard of said goods having passed over the same. Thus four revolutions of the roller  $f'$  and its pinion  $g$  must result in one complete revolution of the wheel  $g'$  and in a consequent movement of the wheel  $h$  the distance of one tooth thereof for each yard of goods passed over said roller, and it is evident that the number of yards so rolled off the bolt and over the roller will be indicated by the figures upon said wheel  $h$ , while the figures upon the wheel  $g'$  would indicate the quarters of yards. It will thus be seen that for the purpose of measuring as in invoicing, my device will be of great utility as the necessity of separately measuring each yard of goods from the bolt in the ordinary and laborious manner is entirely obviated.

It is evident that the roller  $f'$ , pinion  $g$  and

gear wheels  $g'$  and  $h$  may be changed with reference to their sizes for the purpose of indicating fractions of yards other than those herein provided for.

The device herein shown and described is adapted to be secured upon a store counter or in any other suitable or convenient place for use.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a goods displaying and measuring device the combination with the base and framework, an angular guide piece on each side of said base and a fixed standard rising from the base, of a traveling standard also rising therefrom, bearing wheels journaled on said traveling standard and running within said guide strips, claws or clamps journaled in said fixed and traveling standards and springs connecting said standards, substantially as and for the purpose specified.

2. In a goods displaying and measuring device the combination with a base and framework, of a fixed and a movable standard rising from said base, an adjustable connection between said standards, clamps or claws journaled on the inner faces of the standards, a roller journaled in said framework, a frame consisting of the arms  $f^2$  and connecting rod  $f^3$ , a pressure roller  $f^4$  journaled therein, a jointed connection between said roller carrying frame and the main frame of the device by means of which said pressure roller is normally in contact with said roller  $f'$ , a pinion on the outer projecting end of the roller  $f'$ , a gear wheel gearing with said pinion, a pin projecting from said gear wheel and a registering wheel having numbered teeth with which said pin is adapted to engage at each revolution of the gear wheel substantially as specified.

HENRY MINISTER.

In presence of—

G. WILSON,  
HOMER ROBINSON.