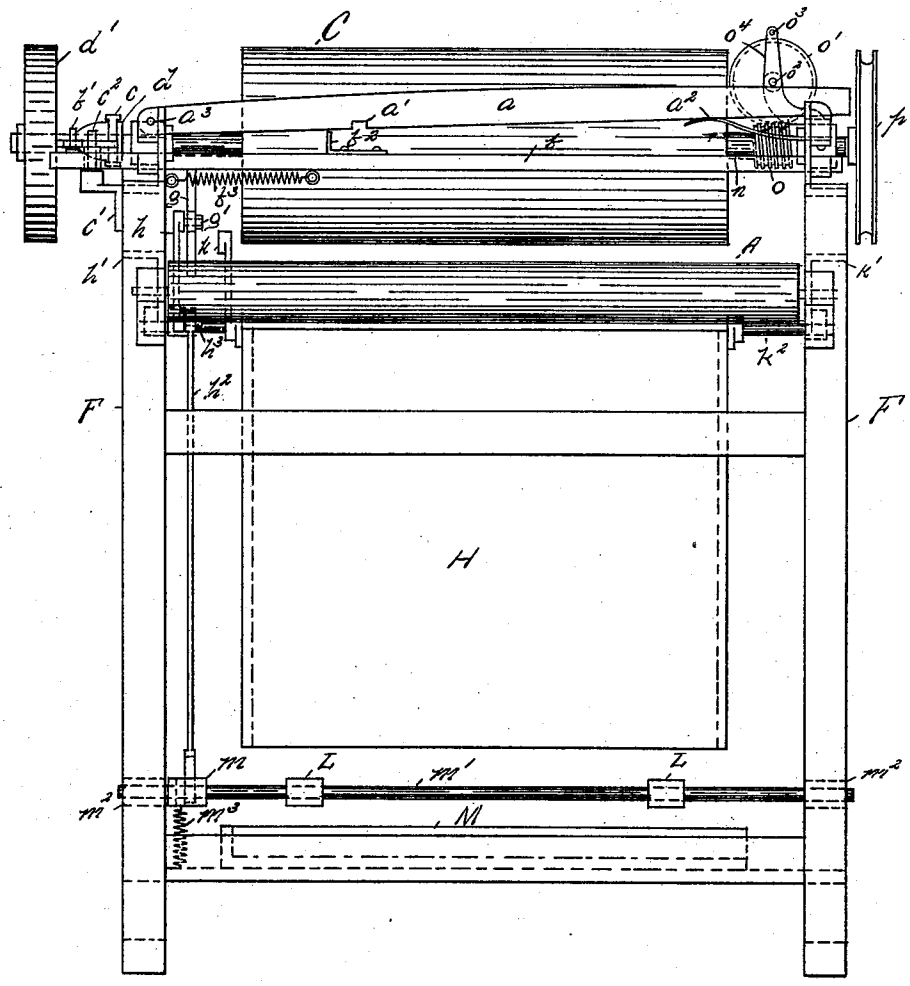
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J. WADSWORTH.

MACHINE FOR MEASURING AND FOLDING FABRICS, &c.

No. 592,264. Patented Oct. 26, 1897.

Fig 1



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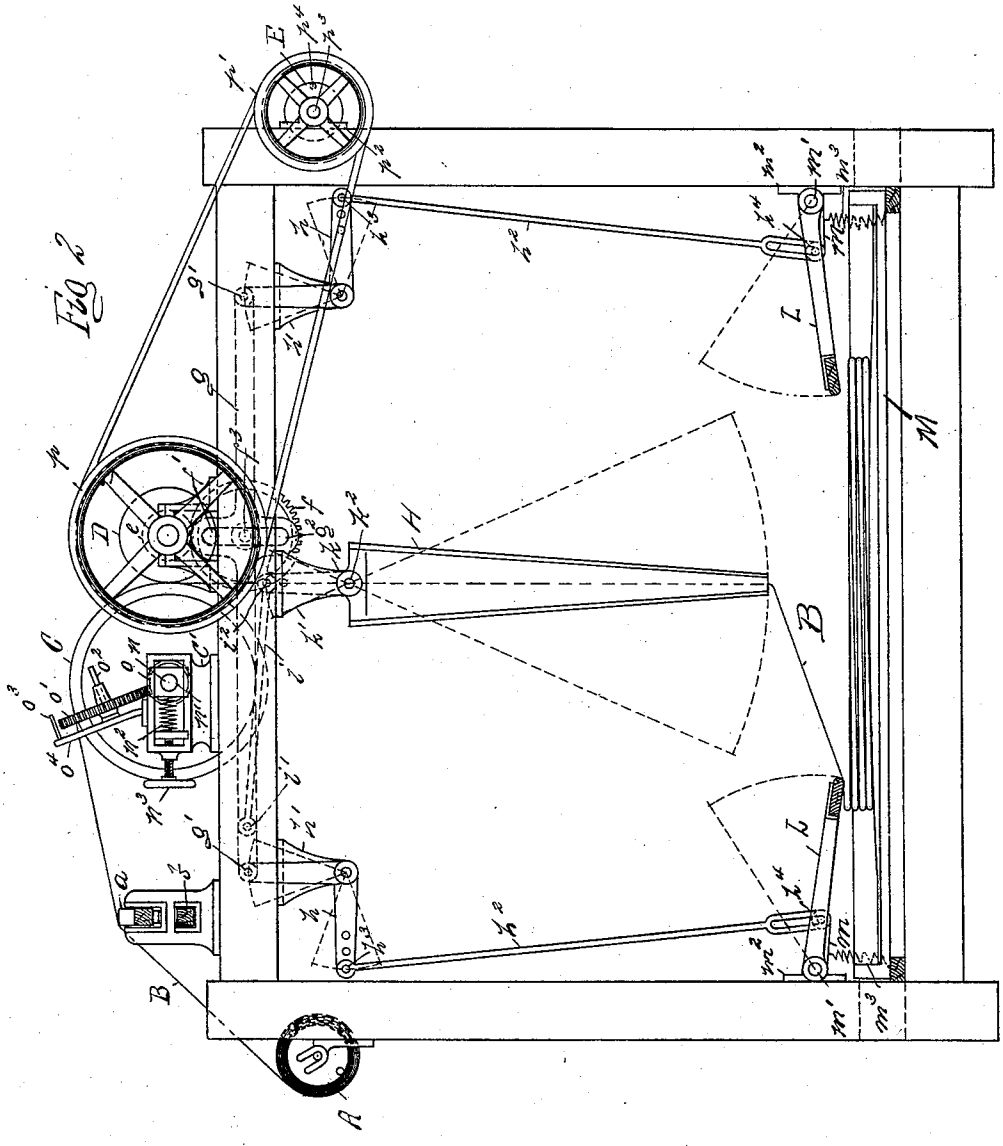
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Fig 2



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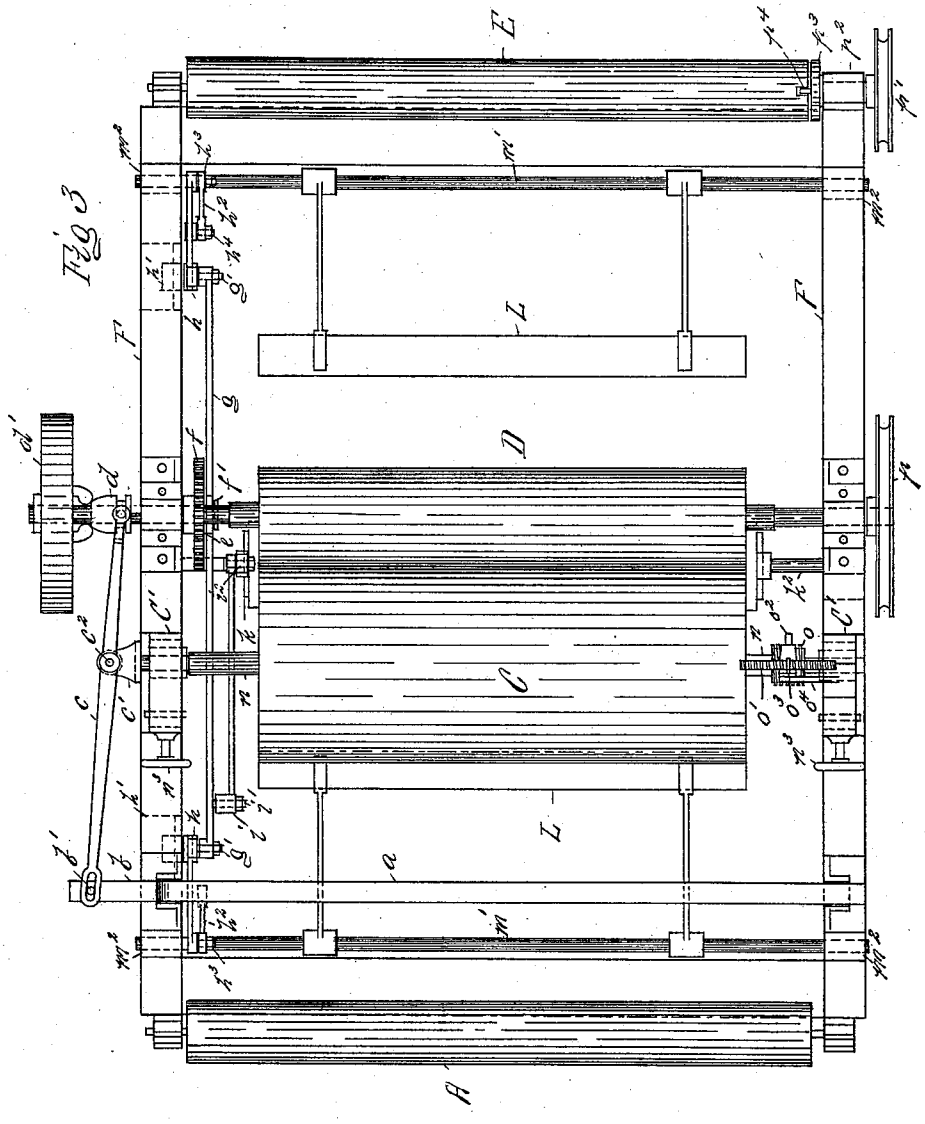
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UNITED STATES PATENT OFFICE.

JOSEPH WADSWORTH, OF PATERSON, NEW JERSEY.

MACHINE FOR MEASURING AND FOLDING FABRICS, &c.

SPECIFICATION forming part of Letters Patent No. 592,264, dated October 26, 1897.

Application filed February 15, 1897. Serial No. 623,394. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WADSWORTH, a citizen of the United States, residing at the city of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Machine for Measuring and Folding Woven Silk Goods in taking it from the beam or for measuring the same in taking it from one beam to another, of which the following is a specification.

The object of my invention is to provide a machine for the measuring of woven goods, especially silk goods, in taking it from the beam to be put on another beam, or for the measuring and folding of the goods in taking it from the loom-beam—a machine that from its simplicity of construction and ease of operation will greatly facilitate the measuring of goods, particularly in factories, and the folding of the same in folds of a length that will enable the inspector to examine the same rapidly, and that by an automatic stop mechanism will be self-controlling and stop-operating when cloth is all measured and indicate by an index the length of the piece, thus economizing in time and labor.

The invention consists of a frame provided with bearings in which are mounted to revolve rollers or beams from which or to which goods are to be taken or delivered; a measuring-drum and a friction-roller to drive said drum and draw the cloth between the two; an oscillating plaiter or folder to receive the goods as it passes between the measuring-drum and the driving-roller and lay it in folds of equal length; a tray to receive said goods and tension-bars to hold the goods down when folded, said bars alternately rising and falling to permit of the folding of goods; a worm on shaft of measuring-drum, and a worm wheel or dial supported on the frame and adapted to be operated by the said worm and to indicate the number of revolutions of the drum and the number of yards of goods passing over the drum, driving mechanism, shipping device, and automatic stop mechanism, and other details, all of which will be hereinafter more particularly described, and which are shown in the accompanying drawings, forming a part of this specification.

In the drawings similar letters of reference indicate like parts.

Figure 1 is a front elevation of the machine, parts being omitted. Fig. 2 is a side elevation of same, and Fig. 3 is a plan view thereof.

In the drawings, A is to represent a roller or beam from which the goods B is passing to be measured and folded, as shown in Fig. 2.

C is the measuring-drum. Its shaft n is mounted in bearings or sliding box n', which is provided with a spring n^2 and a screw n^3, by means of which the frictional contact of the drum C with the driving or friction roll D is regulated.

F represents the frame of the machine.

E is a beam onto which the goods may be delivered before or after being folded or after being measured without folding.

On the shaft n of the drum C is a worm o. A supporting-stand o^4 is secured to the frame F and is provided with a stud o^2, on which is mounted a worm-wheel o' with a dial-face. Secured to the top of the support o^4 is a pointer o^3. The dial is numbered, and as the worm o meshes with the teeth of the worm-wheel o' and causes it to turn with the drum C the number on the dial indicated by the pointer indicates the number of yards passed over the drum. Stands C′ for the measuring-drum are secured to the frame F. Hanger-brackets k' are secured to the frame F and are provided with studs K^2, which are fulcrums of lever k for plaiter or folder H. The plaiter H is mounted on studs k^2, and in operation it describes the arc shown by the dotted line in Fig. 2 and distributes the goods, as shown in said figure, in the tray M. The tension-bars L L on shafts m' in bearings m^2 are connected with the bottom of the frame by springs m^3, the natural tension of which is to hold the bars L L down on the goods as folded in Fig. 2; but said bars L L are connected with bell-cranks h h in brackets h' h' by the bars h^2 h^2 and studs h^3 h^4, which bell-cranks h h are in turn connected by the studs g' g' to the traverse-bar g, which is provided with the slot g^2 for the stud f', by which it is driven. To provide for the building up of the goods, rods h^2 h^2 are provided with slots at the lower ends, as shown in Fig. 2.

The connecting-bar i is secured by studs i' and i^2 to the traverse-bar g and upper portion of lever k.

The spur-wheel f revolves on stud f^3 and

is driven by the spur-pinion *e*. The stud f^3 is mounted on the frame F, and the stud f' is mounted on the spur-wheel *f*.

A spring-actuated bar *a*, over which the goods pass from the beam to the measuring-drum, is provided with a notch a', adapted to be engaged by the catch b^2. One end of the bar is pivoted on the pin a^3. The other end is pressed upwardly by a tension-spring a^2. A shipper-rod *b* is provided with a catch b^2 to engage said notch a', and also with the spring b^3 and stud b', to which one end of shipper-fork *c* is pivotally secured.

The shipper-fork *c* is pivotally secured to the stud c^2, which is mounted on the frame F in the stud-bracket c', the stud c^2 forming a fulcrum for the shipper-fork, one end of which is connected with the shipper-rod, its other end being secured pivotally to the stud that operates the friction-cone *d* by putting it in or out of contact with the friction-pulley d' in starting or stopping the machine.

The tension of the cloth passing over the bar *a* holds it down, the notch a' being engaged by the catch b^2. When the cloth has all passed over the bar *a*, the spring a^2 forces the bar *a* up, catch b^2 is released from notch, the spring b^3 draws the shipper-bar *b* back, the cone is released, and the machine stops automatically.

Weights may be suspended in the usual way from the beam-shaft from which the goods are being taken to cause the desired tension to hold the bar *a* down, as stated.

The catch b^2 consists of an L-shaped piece of metal, which is secured on top of the shipper-rod so that one portion of the catch projects vertically and at right angles to the shipper-rod and engages the notch a' in the spring-actuated bar *a* when it comes in contact with said nut.

With this description of my invention, what I claim is—

1. In a machine for measuring and folding fabrics, the combination with the swinging folder and the alternately rising and falling tension-bars, of the frame, a spur-wheel mounted on a stud secured to the frame, a stud eccentrically located on the face of the said spur-wheel and adapted to engage a vertical slot in the traverse-bar, a traverse-bar having a vertical slot to receive said eccentric stud, the rods, the lower ends of which are provided with a slot and are pivotally connected with the tension-bars at the lower portion of the frame, the bell-cranks pivotally secured to the frame and pivotally connecting the upper ends of said rods and the ends of traverse-bar, a bar pivotally connecting the lever-arm of the swinging folder to the traverse-bar, a driving-shaft provided with a spur-pinion to mesh with said spur-wheel and means for driving the said shaft, substantially as shown and described.

2. In a machine for measuring and folding fabrics, the combination with the frame, the driving-shaft and means for driving the same, a shipper-rod, shipper-fork, a friction-cone and a friction-pulley, of a spring-actuated bar over which the goods pass, pivotally secured at one end to the frame above said shipper-rod and provided underneath with a notch, a catch on said shipper-rod to engage the notch in the spring-actuated bar, a spring connecting the shipper-rod and the frame to separate the friction-cone and the friction-pulley by tension on the shipper-rod when the catch on the shipper-rod is released from the notch in the spring-actuated bar, a spring under the free end of said spring-actuated bar having an upward pressure to release the said bar from the catch on the shipper-rod when no fabric is passing over said bar, substantially as shown and described.

JOSEPH WADSWORTH.

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