C. B. ALLYN.

CLOTH-MEASURING MACHINE.

No. 187,796. Patented Feb. 27, 1877.

Fig. 1.

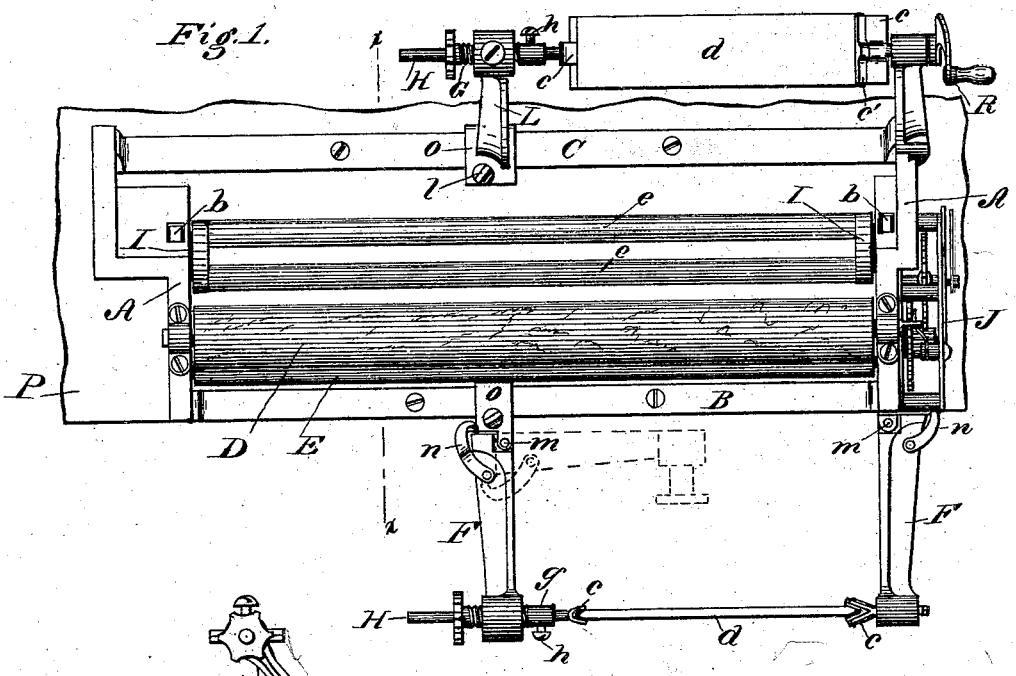


Fig. 2.

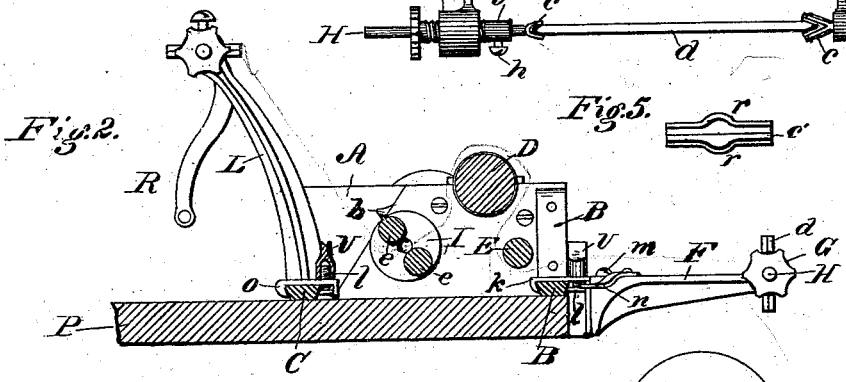
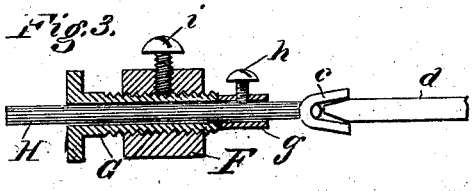


Fig. 5.

Fig. 3.



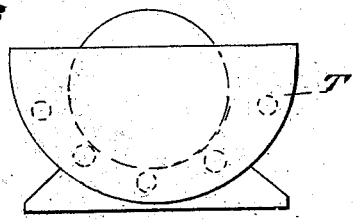
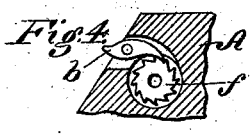


Fig. 4.



Witnesses:

Donn P. Twitchell

Will H. Dodge

Inventor:

C. B. Allyn.

by Dodge & Son.

Attys.

UNITED STATES PATENT OFFICE.

CHAUNCEY B. ALLYN, OF GRAND RAPIDS, MICHIGAN.

IMPROVEMENT IN CLOTH-MEASURING MACHINES.

Specification forming part of Letters Patent No. **187,796**, dated February 27, 1877; application filed May 23, 1876.

To all whom it may concern:

Be it known that I, CHAUNCEY B. ALLYN, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain Improvements in Cloth Winding and Measuring Machines, of which the following is a specification:

My invention consists in certain improvements in the construction of cloth winding and measuring machines, whereby they are rendered more compact and portable, and also more perfect in their operation, as hereinafter more fully explained.

Figure 1 is a top-plan view of the machine complete. Fig. 2 is a transverse section on the line *x x* of Fig. 1; and Figs. 3, 4, and 5 are detail views, showing the construction of parts.

Various machines have heretofore been constructed for winding and measuring fabrics; but, as usually made, they are too large and bulky for convenient transportation, occupy much room, and are more or less imperfect in operation.

The present invention is designed to obviate these objections, and furnish a comparatively small, compact machine, adapted for use in stores, and capable of winding and measuring all the various fabrics ordinarily sold in stores.

To construct a machine on my plan I provide two metallic end pieces, A, made with an offset, as shown in Figs. 1 and 2, and connect them by two bars, B and C, which, for convenience in packing and shipping, are secured to the end pieces by bolts or screws in such a manner that they can be readily detached. These bars B and C are secured, one at the front and the other at the rear, on a line with the bottom of the end pieces, as shown in Fig. 2, and are provided with screw-holes, by which the machine can be fastened upon a counter or shelf at any desired point.

As shown in Fig. 2, these bars B and C have their front and rear edges beveled or inclined, thus making them narrower at the bottom than at the top, to enable one each of the arms F and L to be clamped thereto, so as to be readily adjustable to and fro thereon, and allow them to be easily detached, when required, for packing, the corresponding arms of each pair being so bolted or secured to the end piece that they can also be detached.

The manner of securing the adjustable arms to the bars is shown in Fig. 2, each arm having a clamp, O, which locks over the edge of the bar B or C, on which it slides, the clamp O projecting on one side of the bar far enough to permit a screw, *l*, to project down through between it and the bar, and which has a wedge-shaped head at its lower end, so that when a cap or nut, *v*, fitted upon the upper end of this screw *l* is turned the screw is drawn upward, thereby drawing its wedge-shaped head in between the lip of the clamp O and the inclined edge of the bar, thus wedging and clamping the arm fast in position on the bar.

The front pair of arms F are hinged to their clamps by a pivot, *m*, in such a manner that they can be folded inward against the bar B, as shown in dotted lines in Fig. 1, they being provided with a hook, *n*, by which they can be locked fast when turned out, these hooks being arranged to engage with a shoulder on the clamps, as shown in Fig. 1.

Each pair of arms F and L is provided with clamps *c*, which are journaled in the arms so as to rotate freely, these clamps each being made with two lips having a V-shaped groove extending between them their whole length, as shown in section in Fig. 3, and in front elevation in Fig. 5. At their centers this groove is enlarged, so as to form a V-shaped cavity, *r*, in each lip at its center, so as to receive and hold either a roll or a board, *d*, having an enlargement on its ends to fit in these cavities *r*, and thereby secure its being centered so as to revolve truly.

For the purpose of winding fabrics on a center board which shall not project beyond the edge of the fabric when wound, I provide an extra clamp, *c'*, made without any journal, of such a shape as to fit in the clamp *c*, and grasp the end of the roll or board the same as the others. By this means the fabric can be wound so as to lap over this extra clamp as far as the end of the board projects at the opposite end into the clamp there; and when the roll is completed and the extra clamp removed, the board or roll, as the case may be, can be shoved into the roll of the fabric, so as to be even

therewith at each end. This is especially desirable in all that class of goods where it is desired to have the center board or roll on which the fabric is wound within the roll of fabric after the winding of the same is completed.

Near the front of the frame I journal a small roll, E, as shown in Figs. 1 and 2, and above, and a little in rear of this, another and larger roll, D, which latter is covered with cloth or fabric of some kind, in order to give more adhesion of the fabric passing over it, thus insuring the rotation of this roll, and thereby the operation of the register J, which is driven therefrom. This register, being of any desired style or kind, need not be further described. In rear of these rolls I locate a tightening device, by which the tension of the fabric being wound can be regulated at will. This device consists of two rods, *e*, secured at their ends to disks I, which latter are journaled in the end pieces A of the frame. Upon the journals at each end is secured a ratchet, *f*, as shown in Fig. 4, these latter fitting in recesses made for them in the outer sides of the plates A. A pawl, *b*, is inserted in a recess made in the plates A at the offset, as shown in Figs. 1 and 2, so that its inner end, which is made the heavier, will engage in the ratchet *f*, as shown in Fig. 4, thereby automatically locking the tension device in position.

In operation, the cloth or material being wound is passed between the rods *e e*, which are then turned so as to bring the required amount of strain on the cloth, the pawls *b* automatically locking and holding them in that position until released, which is done by simply pressing on the projecting ends of the pawls.

In order to hold the boards or rolls with the required degree of firmness, I mount the journals H of one of the clamps *c* in tubular sleeve G, which screws into the arm, as shown in Fig. 4, there being a loose sleeve or washer, *g*, on the journal H, with a set-screw, *h*, as shown. The board *d* being inserted between the clamps *c* of the arms, this loose sleeve *g* is adjusted so as to bear against the inner end of the screw-sleeve G, and fastened to the journal by the set-screw *h*, after which, by turning the screw-sleeve G, the journal H can be crowded inward, so as to clamp and hold the board with any desired degree of tightness, a set-screw, *i*, serving to hold the sleeve G and prevent it from turning or becoming loose.

In the drawings, P represents a portion of the counter or shelf, with the machine secured thereon as it is when in use.

The manner of using the machine will be readily understood by those familiar with this class of implements. In winding the lighter rolls or bundles of goods, the roll is secured in and held by the front arms F. The fabric is then passed under the roll E, over the roll D, between the rods *e*, and thence to the board *d*, held by the rear arms G, a crank, R, being secured to the projecting end of one of the journals of the clamp *c*, as shown in Figs. 1 and 2, by which motion is imparted to the apparatus.

When very heavy goods are to be rewound, such as carpet and the like, a tray, T, having rolls therein, on which the roll of goods may rest, will be used, this tray being set on the floor or any suitable support in front of the machine, as represented in Fig. 2, this tray being constructed in any desired style.

By this construction it will be seen that I am enabled to make a very compact portable machine, that is adapted for use with all styles of goods, from a roll of ribbon to one of carpet, and which at the same time is simple, cheap, and durable.

Having thus described my invention, what I claim is—

1. In a cloth-winding machine, the frame composed of the end plates A and beveled cross-bars B and C, with the adjustable arms F G secured thereon by the clamps O and screw *l*, all constructed to operate substantially as set forth.

2. The arms F, hinged to their supports so as to permit them to be folded against the front bar, substantially as described.

3. The combination of the journal H with the sleeve *g*, provided with a set-screw, *h*, and the tubular screw-sleeve G, for adjusting the clamp *c*, as and for the purpose set forth.

4. The clamp *c*, provided with the recesses or enlarged cavity *r* at its center, substantially as described.

5. The loose or extra clamp *c'*, for use in connection with the journaled clamps *c*, substantially as and for the purpose set forth.

6. In combination with the pivoted or hinged arms F, the hooks *n*, arranged to lock the arms in position, substantially as set forth.

CHAUNCEY B. ALLYN.

Witnesses:
P. T. DODGE,
W. C. DODGE.