

United States Patent Office.

THOMAS M. BRINTNALL, OF MEDINA, OHIO.

Letters Patent No. 101,979, dated April 19, 1870.

IMPROVEMENT IN CLOTH-MEASURING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, THOMAS M. BRINTNALL, of Medina, in the county of Medina and State of Ohio, have invented a useful and improved Machine for Measuring and Folding Cloth; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to fully understand and to make and use the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 is an end elevation;

Figure 2, a top view; and

Figure 3, a front elevation of the machine.

Figure 4 is a detail view to be hereinafter more fully referred to.

The object of this invention is to provide a simple and accurate machine which can be furnished at a moderate price, and adapted especially for use in wholesale and retail stores in taking inventory of goods on hand, and also for folding, bolting, or rolling cloth.

The invention embodies an improvement in the winding mechanism, in the tension device for the registering-rollers, in the swivel-chucks for holding the bolt, roller, or folding-board, and in securing the machine to the counter.

The invention consists in the construction, arrangement, and combination of parts as hereinafter set forth, to form a simple, durable, and accurate machine for the purposes specified.

I will now proceed to describe the invention in detail, referring to the accompanying drawing, wherein similar letters indicate like parts in the several figures.

A A represent the sides of a light frame-work adapted to support the working-parts; and

B B' are cross-pieces connecting the sides.

In practice this frame will be composed of light castings, and the portions *a a* of the sides will be either partially or entirely dispensed with.

The front cross-piece B' of the frame is provided with a longitudinal slot, *b*, in which a standard, C, is adjustable, and is adapted to be fixed in position by means of a set-screw and nut in the usual way.

In the upper part of this standard is fitted a thumb-screw, *c*, and a similar screw, *c'* passes through the stationary standard D, which, in practice, will form a part of the frame-work. Both set-screws *c c'* are pointed; as shown, to form pivots, on which a "bolt" or roller may revolve in unwinding the cloth therefrom.

To more securely hold the bolt or roller, I provide one or both of the screws *c c'* with a swiveled clutch, *f*. This clutch is cast with lips *i i i i*, which form a socket to receive the end of the bolt or roller. The points of the screws *c c'* enter small cavities made in the bolt or roller.

The object in having the standard C adjustable is to accommodate bolts of different lengths. By tightening the screws *c c'* the bolt or roller is held more or less firmly, as desired.

E is a roller journaled in bearings in the upper part of the sides A A of the frame. This I term the supporting-roller, as the cloth from the bolt passes over it, and thereby all wrinkles are smoothed out. On this roller are fitted sliding gauge-collars *h h*, which, in operation, are moved up to the edges of the cloth, and fixed by means of set-screws.

F represents the registering-roller, which is journaled in stationary bearings in the frame A A. This roller is wrapped or covered with cloth or equivalent material, to make a surface which will induce friction.

G is the tension-roller, situated immediately below the registering-roller.

The roller G turns in bearings *y y* attached to the free end of flat springs I I, (see fig. 4,) which springs are secured to cast blocks *z z* pivoted to the sides A A of the main frame.

To regulate the tension and increase or diminish the pressure of the roller G against the upper roller, thumb or set-screws *p p*, passing through lugs *m m* cast on the frame, are employed. These screws bear on the springs I I back of the pivots on which they turn. A very effective, simple, and easily-adjusted tension-device is thus produced.

On the journal of the registering-roller is a single projection, *o*. At each revolution of the registering-roller this projection *o* engages with a toothed wheel, H, and turns the same the distance of one tooth, this wheel H being mounted on a pin, *p'*, fixed in the main frame of the machine.

The wheel H is provided on its outer face with a space, *q*, graduated to represent, by preference, whole, half, and quarter yards.

r is a pointer, secured to the frame A, and extending over the graduated space on the wheel H. The fractions less than a quarter yard are marked on the frame A in such position that the projection *o* will serve as the indicator to point them out.

If desired, a second graduated and toothed wheel may be arranged so that, at each revolution of the wheel H, this second wheel will be moved a single space, by means of a tappet on said wheel H. To prevent the wheel H from slipping, I employ a flat spring, *s*, which is so secured to the frame that its free end presses against the periphery of the toothed wheel and holds it by friction.

My folding or bolting mechanism consists of a clutch, *t*, attached to a short shaft, *u*, journaled in one side of the frame, and a pointed thumb-screw, *v*, in the opposite side A. The receiving-bolt or folding-board, *w*, is held by the clutch *t* and screw *v*, as clearly shown.

I prefer to set short pins in the edge of this bolt as a means for taking hold of the end of the roll of cloth.

I would here mention that, instead of using flat bolts or folding-boards, round rollers may be employed, the clutches *f t* and screws *c v* being as well adapted to hold cylindrical as flat bodies.

Heretofore the receiving-bolt has been generally rotated by means of a simple crank, which is necessarily a slow operation. I attach the crank to a drive-wheel, *J*, which engages with a pinion, *K*, on the journal of the short clutch-shaft *u*. By this means greatly-increased speed is obtained.

It should be borne in mind that this machine is principally intended for use in taking inventory of goods; and to further adapt it for this I provide means for securing the apparatus to the counter.

x x are L-shaped clips, adjustably secured to the sides of the main frame of the machine by means of a set-screw passing through a slot in the clip. The upper surface of the bent portion of each clip is roughened, so as to make it take hold upon the under side of the edge of the counter, when the clip is adjusted and fixed by means of the set-screws.

The operation of the machine is as follows:

After setting the registering-dial at zero, the bolt or roller containing the cloth to be measured is mounted in place, the standard *C* having been properly adjusted, and the loose end of the roll of cloth is carried over the supporting-roller and between the registering and tension-rollers, and secured to the folding-board, which has been previously arranged. The collars on the supporting-roller are now adjusted up to the edges of the cloth, and there fixed, and the tension is regulated according to the thickness of the goods. Now, by turning the crank, the cloth is rapidly transferred to the receiving-bolt or roller, and tightly wound or folded thereon, the number of yards in the piece being registered on the dial.

Merchants frequently have occasion to roll goods which have come in a folded state. This can be easily accomplished with my machine, the end of the folded cloth being carried immediately over the supporting-roller, thence between the registering and tension-rollers to the receiving-bolt or roller.

The machine, as described, is so simple that it can

be furnished at a price within the reach of all; and it has been found to do its work accurately and rapidly, thus greatly lessening the time required for taking an inventory of stock.

I do not claim broadly a pivoted tension device, a swiveled clutch for the folding-board, or a thumb-screw for attaching a portable machine to a table; neither do I claim broadly the combination of gearing with the winding-board, nor the combination of a tension-roller, pivoted tension device, registering-roller, and indicating mechanism; but

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the pivoted flat springs *I*, bearings *y*, and screws *p*, with the roller *G*, all constructed, arranged, and operating substantially as described.

2. The swiveled clutches constructed, as described, with lips *i i i i*, so as to hold either a roller or a flat board, as herein set forth.

3. The relative arrangement, herein shown and described, of the clutch *t*, shaft *u*, pinion *K*, wheel *J*, and crank-handle, all operating as and for the purpose set forth.

4. The combination of the cloth-covered registering-roller *F*, the tension-roller *G*, pivoted flat springs *I*, screws *p*, graduated wheel *H*, tooth *o*, indicator *r*, and spring *s*, all constructed, arranged, and operating substantially as and for the purposes described.

5. The combination and general arrangement of the devices for holding the bolt containing the cloth to be measured, the supporting-roller with gauge-collars, the pivoted tension device and tension and registering-rollers, the registering mechanism, and the means for holding and winding the folding-board or roller, all adapted for joint operation, substantially as herein described.

To the above specification of my invention I have signed my name this 18th day of February, 1870.

T. M. BRINTNALL.

Witnesses:

GEO. W. ROTHWELL,
CHAS. C. WILSON.