

(Model.)

G. W. CLAPP.
BOBBIN WINDER.

No. 298,554.

Patented May 13, 1884.

Fig. 1.

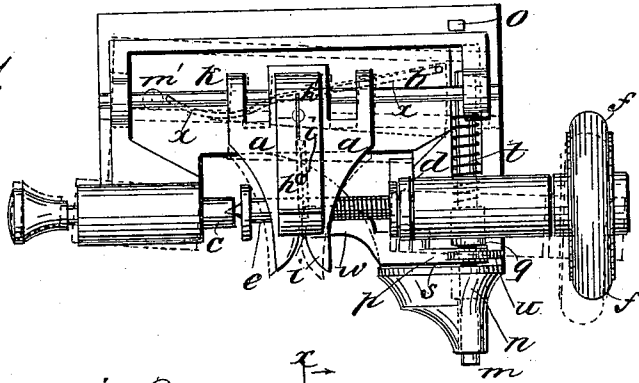


Fig. 2.

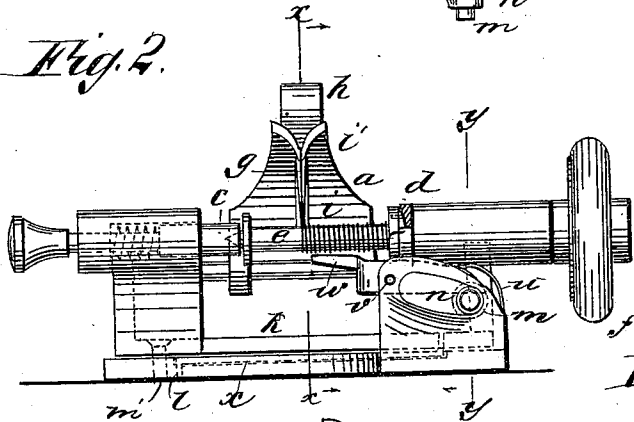


Fig. 6.

Fig. 3.

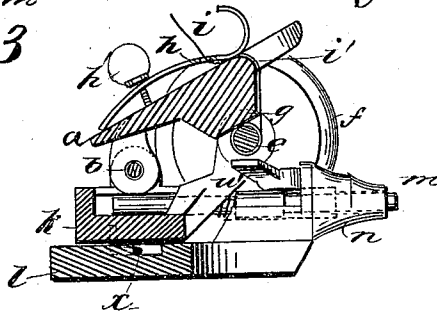


Fig. 5.

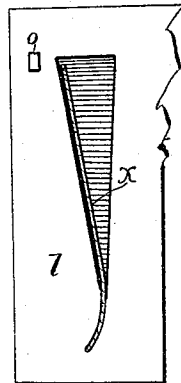
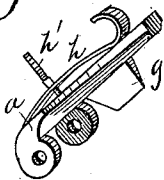
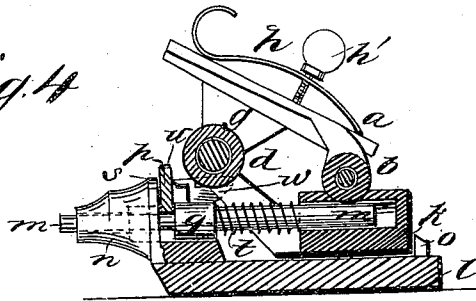


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE W. CLAPP, OF ALLEMANCE, NORTH CAROLINA.

BOBBIN-WINDER.

SPECIFICATION forming part of Letters Patent No. 298,554, dated May 13, 1884.

Application filed August 4, 1883. (Model.)

To all whom it may concern:

Be it known that I, GEORGE W. CLAPP, of Alleurance, in the county of Guilford and State of North Carolina, have invented a new and Improved Bobbin-Winder, of which the following is a full, clear, and exact description.

My invention consists of a knife-edge of the traversing guide bearing on the bobbin, and a tension device on the guide, through which the thread passes with sufficient tension to cause the knife-edge to bear on the bobbin in front of the coil of thread being laid, and thus be caused to traverse suitably for and to guide any size of thread automatically.

My invention also consists of a stop device contrived to throw the winder out of gear when the bobbin is full, and enabling the winder to be geared with the sewing-machine without altering the machine or even stopping the sewing, all as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved bobbin-winder, with dotted lines showing the position when it has been shifted out of gear by the stop device. Fig. 2 is a front elevation of the said improved bobbin-winder. Fig. 3 is a sectional elevation taken on line *xx* of Fig. 2, and Fig. 4 is a sectional elevation of Fig. 2 on line *yy*. Fig. 5 is a perspective of the traverse guide-block; and Fig. 6 is a plan view of a portion of the bed-plate, showing its spring in the recess thereof.

The traversing guide-block *a* is pivoted on the rod *b*, parallel to the center *c* and chuck *d*, in which the bobbin *e* is placed to be revolved by the soft-rubber wheel *f*, that is set in contact with the periphery of the band-wheel of the sewing-machine. Said traverse guide-block *a* is also fitted to slide along said pivot-rod forward and backward, and it has a knife-edge, *g*, resting on the bobbin. It also has a tension-spring, *h*, under which the thread *i* passes on its way through the guide-notch *i'* to the bobbin *e*, so that said guide-block will be drawn down by the thread, and its knife-edge caused to bear with some pressure on

the bobbin, which will cause the said edge to run ahead of the coil, which will thus cause the traverse of the guide-block, the movement of which will be governed entirely by the size of the thread, thus dispensing with any gears or other device to work the traverse, and avoiding the necessity of making any adjustments for thread of different sizes. The spring *h* has an adjusting-screw, *h'*, to regulate the tension of the thread.

The means employed for automatically throwing the winder out of gear when the bobbin is full are as follows: The base-plate *k* of the machine is pivoted on the bed-plate *l*, so as to swing on pivot *m'*, as indicated by the dotted lines in Fig. 1, and a push-rod, *m*, is fixed in a bracket, *n*, of the bed-plate, to push the plate *k* up to the stud *o*, to move wheel *f* forward into contact with the face of the wheel of the sewing-machine, and a stop-latch, *p*, is provided for said push-rod, that drops behind a shoulder, *q*, of said rod and in front of the shoulder *s* of bracket *n*, to hold wheel *f* against the sewing-machine wheel. The rod *m* has a coiled spring, *t*, on it, to act on the plate *k* with a cushioning effect, and the stop-latch *p* has a spring, *u*, that causes it to drop behind collar *q* when the wheel *f* is pushed into gear. The stop-latch *p* is fitted on pivot *v*, and its arm *w* extends along under the bobbin, so that when the bobbin is full it will bear arm *w* down and raise the other end of the stop-latch from collar *q*. The plate *k* will then be shifted back by the spring *x* in a recess of plate *l*, throwing the wheel *f* out of gear with the wheel of the sewing-machine by which it is driven. The spring *x* has one end secured in a recess in the bed-plate *l* and its other end connected to the base-plate *k*. Thus it will be seen that the operator may, after setting the winder in motion, proceed with his work on the sewing-machine without further attention to the winder, which will then fill the bobbin and stop itself.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bobbin-winder, the combination, with a traverse guide-block having a knife-edge, of a tension-spring for the thread on said guide-

block, substantially as herein shown and described, whereby the knife-edge will be pressed upon the bobbin by the thread, as set forth.

2. In a bobbin-winder, the combination, with
 5 the base-plate *k*, carrying the bobbin-holding devices, of the traverse-block *a*, pivoted loosely on the rod *d*, and provided with the knife-edge *g* and the guide-notch *i*, the tension-spring *h*,
 10 and the adjusting-screw *h'*, substantially as herein shown and described.

3. In a bobbin-winder, the combination, with

the bed-plate *l*, provided with the bracket *n* and stop *o*, the base-plate *k*, pivoted to said bed-plate, and the spring *x*, of the push-rod *m*, provided with shoulder *g*, the spring *t*, surrounding said rod, the latch *p*, having arm *w*, and the springs *u*, substantially as herein shown and described. 15

GEORGE W. CLAPP.

Witnesses:

C. A. BOON,

D. W. HUFFMAN.