

ELIHU WILDER.

Improvement in Bobbin Winders.

No. 125,869.

Patented April 16, 1872.

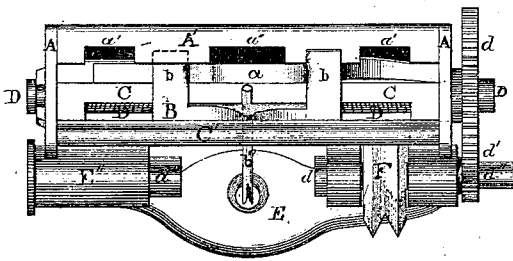


FIG. 1.

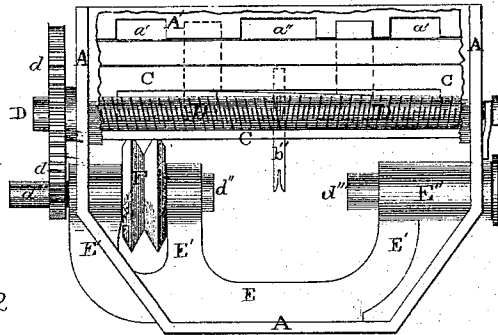


FIG. 2.

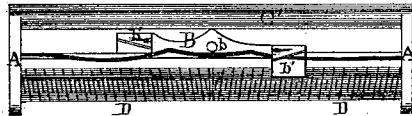


FIG. 3.

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ELIHU WILDER, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN BOBBIN-WINDERS.

Specification forming part of Letters Patent No. 125,869, dated April 16, 1872.

Specification describing certain Improvements in Thread-Winders, invented by ELIHU WILDER, of Springfield, in the county of Hampden and State of Massachusetts.

My invention relates to devices for the purpose of laying the thread evenly on bobbins for sewing-machines or other purposes, as will be more fully hereinafter explained.

In the drawing, Figure 1 represents a top view of the invention; Fig. 2, the opposite side to Fig. 1; and Fig. 3, an edge view from the upper side of Figs. 1 and 2.

Similar letters refer to like parts in all of the figures.

A is the frame, on which all of the various parts are sustained, made of any suitable metal, and may be either plate or cast metal, and of size to suit any length of spool or bobbin; and it may be attached to any sewing-machine in any suitable and convenient manner. B is a tilting or rocking bar, having at each end an arm, *b*, and underneath at each end a projecting piece, *b'*, curved out to one-half of a circle, and having threads cut therein to correspond with the threads on a screw-shaft, D, which has right and left screws cut thereon. The rocking bar B has permanently fastened at its middle part a rod, *b''*, which is forked at the end for the thread to enter. The rocking bar B is moved freely between two guides, C C, and a third upper guide-rod, C', so that its relative position is assured as it moves laterally between them from end to end. E is a yoke, which is fastened to the frame A, and it has arms E' E', which have hollow spindles E'' E'', through which are arbors *d'' d''*, which support the bobbins or spools. F is a pulley on spindle *d''* to communicate motion from the driving-shaft or prime motors. On the end of arbor or spindle *d''* is a pinion, *d'*, gearing into spur-wheel *d* on the end of screw-shaft D; and when motion is communicated to pinion *d'* and spur-wheel *d* the feed-screw D is rotated. *a* is a spring operating on the arms *b* of the rocking or tilting bar B, and it causes the end *b* to be thrown above the notch *a''*, when it reaches that part of the governor or

regulator bar A', and this movement lifts this end of the bar from D, and causes the other end of the bar to be thrown into the notch *a'* and into engagement with the screw. *b b* are the arms of the rocking bar B, which serve to keep the half-nuts *b'*, which are under the ends of the bar B, in gear with the screw D by being confined under the regulator-bar A'. One arm, *b*, may be used instead of two.

Having thus described the various parts of this device, I will describe the operation: The spool being placed in position between the spindles *d''* and *d''*, the thread is placed in the fork of the rod *b''* and fastened to the spool when the rod *b''* is at either end. Motion being communicated, the action of the gear-wheel *d*, operated by the pinion *d'*, will cause the rod *b''* to traverse the spool with the proper speed required to "lay" the thread evenly along the bobbin or spool, and this continues until it shall arrive at the other end, when the arm *b* having at that moment cleared the regulator-bar A' at the notch *a''*, the spring *a* immediately throws up the arm *b*, and consequently the right-hand screw-nut is disengaged, and the other end-nut becomes engaged with the left-hand screw, and consequently the bar B returns on its course, and the arm *b* enters the notch *a'* and is confined under the projection between *a'* and *a''*, and keeps the half-nut engaged with the screw D until it is released at the central notch *a''*, as was the other end.

One of the projecting pieces between the notches *a' a''* might be dispensed with. The rocking bar B is guided on its two sides by the guides C C and on top by the guide-bar C'. This latter bar C' may be dispensed with by placing a pin through the rocking bar and under the guides C C. The spring *a* may be at each end of the frame to operate on the end arms *b b* to press them down alternately, instead of acting in the middle to press them up. The arms *b b* on rocking bar B, instead of being solidly fixed thereto, may be made separately, slotted, and attached by screws, so that they can be laterally adjusted with

reference to the notch *a''* in regulator-bar *A'*; and bar *A'* may be made adjustable transversely, instead of being fixed solidly to the frame.

Having fully described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States, is—

The thread-winder, consisting of the rocking bar provided with half-nuts, and thread-

delivering rod *b''*, the right and left hand screw, the regulator-bar, and the spring, when constructed substantially as described, and operating as and for the purpose set forth.

ELIHU WILDER.

Witnesses:

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