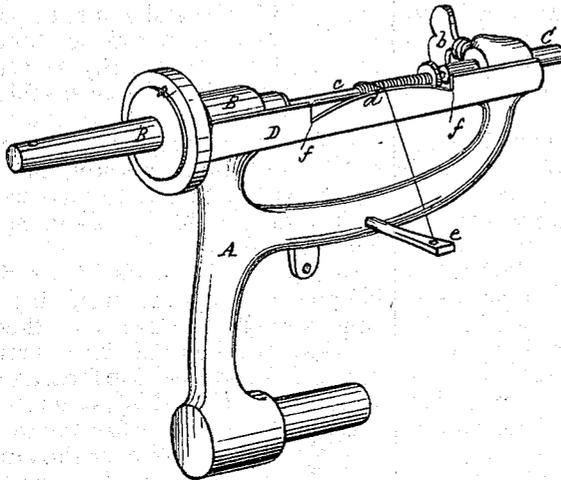


WILLIAM HARRISON NEWTON.

Improvement in Bobbin-Winders for Sewing-Machines.

No. 126,829.

Patented May 14, 1872.



Witnesses.

C. B. Nottingham  
J. R. Nottingham

Inventor

Wm. Harrison Newton  
by atty. A. Pollok

# UNITED STATES PATENT OFFICE.

WILLIAM HARRISON NEWTON, OF NEWPORT, RHODE ISLAND.

## IMPROVEMENT IN BOBBIN-WINDERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 126,829, dated May 14, 1872.

*To whom it may concern:*

Be it known that I, WILLIAM HARRISON NEWTON, of Newport, in the county of Newport and State of Rhode Island, have invented certain new and useful Improvements in Bobbin-Winders, of which the following is a specification.

My invention relates to bobbin-winders for shuttle sewing-machines. Its object is to effect the winding of the thread on the bobbin with regularity and in even layers; and it consists in the employment, for this purpose, of a plate arranged about parallel with the bobbin and provided with a curved guiding-edge or surface, over which the thread to the bobbin passes from a stationary eye or other fixed point, which is equidistant from all points of the curved guiding-edge or surface over which the thread passes to the bobbin. The curved guiding-edge or surface extends the length of the bobbin, and owing to its position, intermediate between the bobbin and fixed eye or point, and its arrangement with relation to the two, the thread can be wound with perfect regularity and in even layers upon the bobbin.

In the accompanying drawing I have represented, in illustration of my improvement, a bobbin-winder made in accordance with my invention, and intended to fit an "Elias Howe machine."

A is the bracket; B, the spindle, with friction-wheel *a*; C, the step, with its set-screw *b*; and between the step and spindle is the removable bobbin *c*. These parts are in common use on the "Elias Howe machine," and do not require further description. About parallel with the position occupied by the bobbin when placed between the spindle and the step I place a plate, D, which has that portion of its edge over which the thread passes to the bobbin curved, as shown at *d*, the curve being so formed as to be equidistant at every point from the eye or fixed point *e*, through which the thread passes. I prefer to form the curve in the plate so that at each end there shall be a notch or depression formed, as indicated at *f*, to prevent the thread from tending to travel further in that direction. The curved edge or surface may be formed on a plate attached to the bracket A, or it may be formed on a piece

cast in one with the bracket, or it may be produced in any other suitable way. The eye *e* is formed in the end of a stud projecting from the bracket; but it may be otherwise located, and need not necessarily be attached to the bracket; nor is it indispensable to have an eye, as a slot or notch for the thread to pass through would answer the purpose, the gist of the invention consisting in having a fixed point for the thread to pass through, which shall bear the relation above specified to the curved guide-edge.

When the device is in use for winding a bobbin the thread from the spool should first pass through the eye, and thence over the curve to the bobbin. The thread should be lightly held between the forefinger and thumb, and no slack should be permitted between the eye and the curve. After the thread is passed through the eye and over the curve, its end is placed between the bobbin and the end of the spindle B, and is there held by pressing the bobbin up against the spindle. The step C is then moved up snugly against the other end of the bobbin, and is held in place by a turn of the thumb-screw. The first two or three revolutions of the bobbin should be made slowly, to allow the thread to start "square," and, as above stated, no slack should be allowed between the bobbin or the curve, and the eye.

With the curved edge or guide-plate placed as described in relation to the bobbin and the fixed eye or point, the thread will guide itself during the winding, and there will be no liability of the folds being unevenly wrapped or wound one upon the other. If, on the other hand, the edge were straight, the difficulty above alluded to would be experienced. For instance, starting at one end of the plate and traveling toward the middle, there would be a tendency in the folds to separate; and again, in advancing beyond the middle toward the other end, there would be a tendency to overlap; and in either event the folds would become misplaced and the bobbin would be poorly wound. When, however, the bobbin-winder is made in accordance with my invention this difficulty is entirely obviated, and the thread becomes, in a certain sense, self-guiding, the curved surface tending to detain

the thread as it winds from one end toward the middle of the bobbin, and to cause it to advance from the middle toward the opposite end.

This improvement is, of course, applicable to the bobbin-winders of other shuttle-machines, with slight variations, as may be required by the special form of the winding attachment of the particular machine to which the improvement is to be applied. I do not, therefore, limit my claim to any special form of bobbin-winder; but—

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

A bobbin-winder, or mechanism for winding thread upon a bobbin in which the thread

passes through an eye or other fixed point to the bobbin over an intermediate curved guide-edge or surface, arranged about parallel with the bobbin and formed so that it shall be equidistant at every point from the said eye or fixed point, substantially as shown and set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

WM. HARRISON NEWTON.

Witnesses:

WM. H. WESTCOTT,  
DAVID H. WEEDEN.