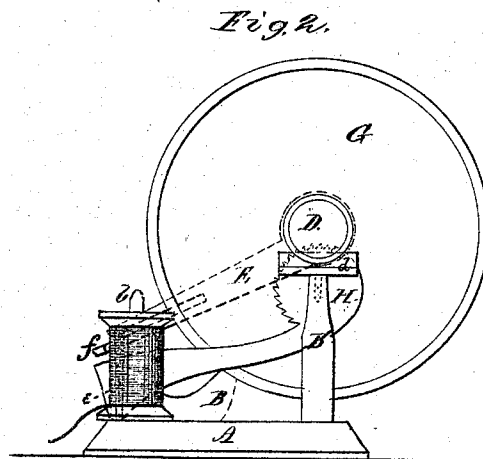
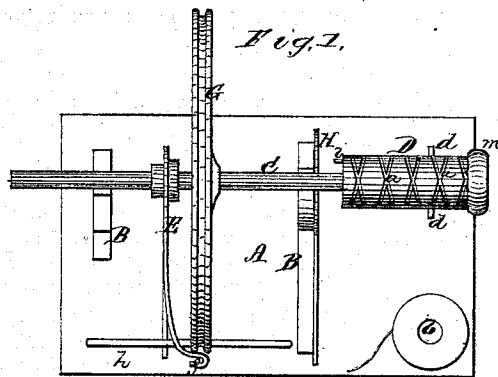


T. M. DAY & H. SHOOK.

Improvement in Thread Guiding and Cutting Devices for Bobbin Winders.

No. 124,667.

Patented March 19, 1872.



Witnesses
Jno. A. Gail.
Wm. & Ellis

Inventor's
T. M. Day & H. Shook
per
J. H. Alexander
att'y

UNITED STATES PATENT OFFICE.

THOMAS M. DAY AND HENRY SHOOK, OF WASHINGTON, OHIO.

IMPROVEMENT IN THREAD GUIDING AND CUTTING DEVICES FOR BOBBIN-WINDERS.

Specification forming part of Letters Patent No. 124,667, dated March 19, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that we, T. M. DAY and H. SHOOK, of Washington Court-House, in the county of Fayette and State of Ohio, have invented certain new and useful Improvements in Bobbin-Winders for Sewing-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in the construction and arrangement of automatic thread guiding and cutting devices for bobbin-winders, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 an end view of our machine.

A represents a bed-plate of any suitable dimensions, upon which are two posts or standards, B B, supporting at their upper ends, in suitable boxes, a horizontal shaft, C. The boxes or bearings for this shaft are so arranged that the shaft cannot only revolve, but also move laterally or endwise. The lateral or end motion of the shaft C is produced by means of a roller, D, attached on the shaft at one end, and provided around its circumference with an endless groove, *a*, running from end to end of the roller; or, in other words, two grooves running spirally in opposite directions from end to end, and the ends of the grooves running into each other, as shown. A key or feather, *d*, pivoted on the upper end of a post, B', works in the groove *a* on the roller. The spool is placed on a post, *b*, in the corner of the bed-plate A, and the thread passes from the same through a notch, *e*, in the extended base of the post B next to the spool. From thence it passes through a hook, *f*, in an arm, E, which arm is attached loosely on the shaft C, or the arm may be arranged in any other suitable manner, only so as to bring the hook *f* directly in front of the propelling-wheel G attached to the shaft C, and so as to move with the same for the purpose

of retaining the hook always in the same relative position to said wheel. The arm E is so arranged that it will move sidewise with the shaft, but not revolve. For this purpose the front end of the arm is split or forked and embraces a guide-rod, *h*. From the hook *f* the thread passes around the wheel G and to the bobbin which sits in its usual position on the sewing-machine, and by the turning of the bobbin the winder is set in motion, the thread turning the wheel G as it is wound up, and the latter turning the shaft C and its roller D, so that the whole will be moved endwise by the key *d*, which fits the grooves in the roller. The wheel G is grooved circumferentially, and around the same is a rubber ring, which keeps the thread from slipping over the wheel. A cutter, H, is attached to one of the posts B, and receives motion from a projection, *i*, on the inner end of the roller D, and when the bobbin is full the thread is cut off or held fast.

The inner end of the cutter is toothed, and for each time the grooved roller completes its inward movement the pin on the same moves or turns the cutter the distance of one tooth, and by the time the bobbin is full the cutter has turned down sufficiently to cut the thread.

This attachment may be attached to the machine or made separate to be placed in front of the bobbin while winding, and it may be used with any length of bobbin by varying the traverse of the shaft C by slipping a ring, *m*, on the roller D, to any point where the grooves cross.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the shaft C, grooved roller D, key *d*, spool-post *b*, notch *e*, hook *f*, and wheel G, all constructed and arranged to operate substantially as and for the purposes herein set forth.

2. In combination with the above, we claim the cutter H and projection *i* on the inner end of the roller D, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

THOMAS M. DAY.
HENRY SHOOK.

Witnesses:
I. S. BEREMAN,
W. J. BLOOMER.