

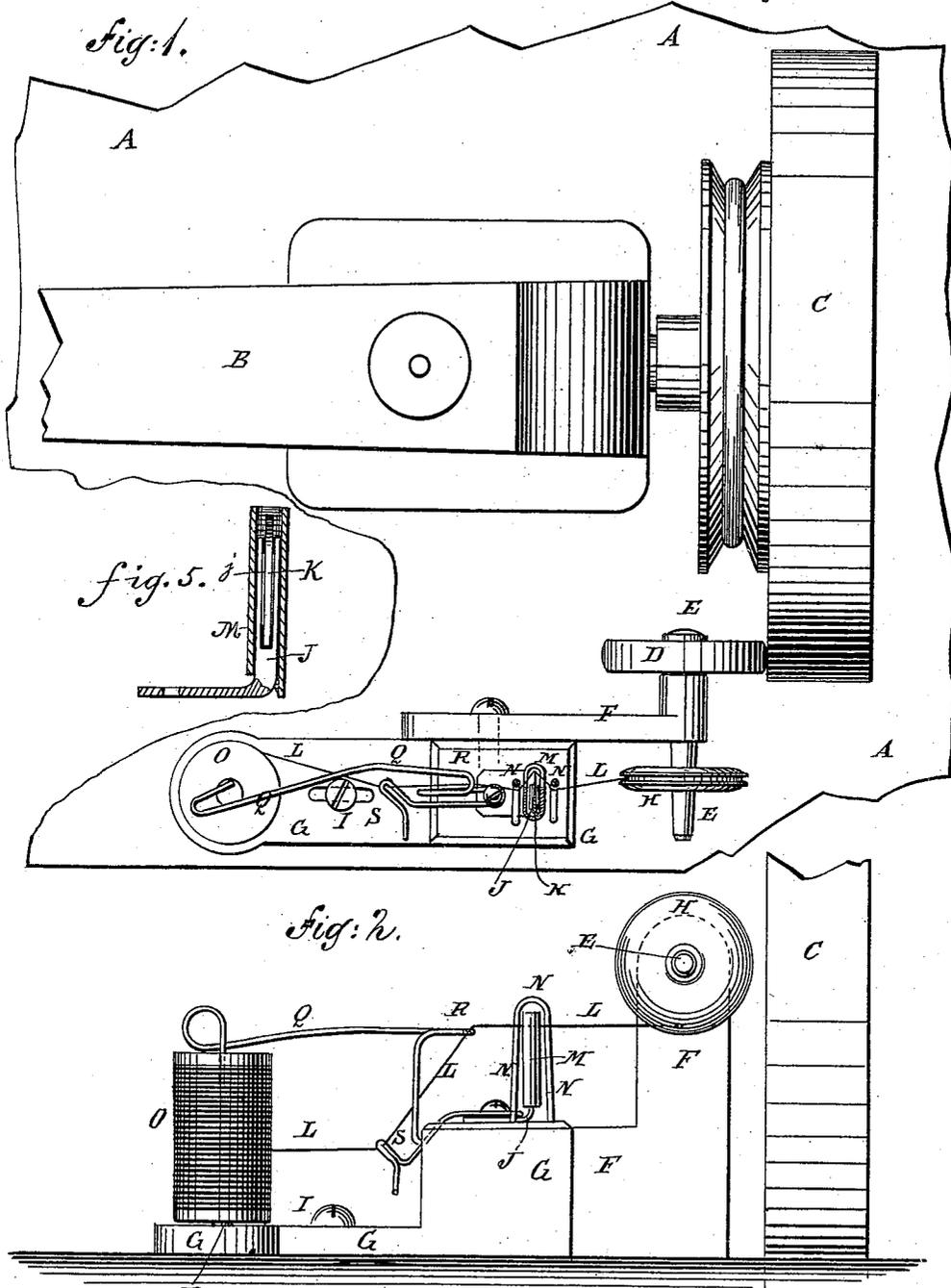
(No Model.)

H. M. DIXON.

BOBBIN WINDER FOR SEWING MACHINES.

No. 298,558.

Patented May 13, 1884.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

H. M. Dixon
BY *Munn & Co*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY M. DIXON, OF NEW YORK, N. Y.

BOBBIN-WINDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 298,558, dated May 13, 1884.

Application filed September 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. DIXON, of the city, county, and State of New York, have invented a new and useful Improvement in Bobbin-Winders for Sewing-Machines, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a 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 improvement, partly in section, and shown as applied to a sewing-machine. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional side elevation of the thread-cutting device. Fig. 4 is a front elevation of the same, showing one of the thread-guides. Fig. 5 is an enlarged rear elevation of the same, part in section.

The object of this invention is to facilitate the winding of sewing-machine bobbins, and also to provide a mechanism for cutting the thread automatically when the bobbins are filled.

A represents the table, B the needle-arm, and C the balance-wheel, of a sewing-machine.

D is a small wheel, of rubber or other suitable material, and which is attached to a spindle, E. The spindle E revolves in bearings in a support, F, attached to the table A, or to a stand, G, secured to the said table. The other end of the spindle E projects to receive and carry the bobbins H to be wound. The stand G is secured to the table A by a screw, I, which passes through a slot in the base of the said stand and into the said table. When the support F is secured directly to the table A, it should be slotted or provided with a slotted lug to receive the fastening-screw, so that the said support can be adjusted to bring the wheel D into contact with the wheel C and remove it therefrom.

To the stand G is attached an upright, J, which is made hollow to receive the knife K, and is recessed or cut away at *j*, as shown in Figs. 3 and 5 of the drawings, upon the forward edge, to allow the thread L to come in contact at the proper time with the edge of the knife. The upright J is covered with a sheath, M, to keep the knife K in place. The sheath M is recessed or cut away at *m* upon

its forward edge, as shown in Figs. 3 and 4, to allow the thread L to come in contact with the edge of the knife K and be cut.

The sheath M is constructed to fit the upright J snugly, as shown in Fig. 5, and thus be held by frictional contact against accidental displacement by the thread L while it is being wound on the bobbin. As an additional means of security against displacement, the sheath M may be provided with a set-screw for binding it against the upright J, or, in fact, in any other substantial way without departing from the spirit of the invention; but in ordinary cases by simply fitting the sheath snugly on the upright J, as shown, it would be properly held. With this construction the sheath M can be adjusted higher or lower, so as to serve as a gage to regulate the point at which the thread comes in contact with the edge of the knife, and thus adapt the device to be used for winding different-sized bobbins.

N is a U-shaped spring, the ends of which are secured to the stand G upon the opposite sides of the rear edge of the sheath M. The spring N inclines forward, so that its bend is above the upper forward corner of the sheath M. The spring N is made of such an elasticity that the pressure of the thread L while being wound upon the bobbin will press back the said spring, and the said thread will pass in between the spring and the upper part of the sheath M, and will thus be put under a proper tension.

The spool O, from which the thread L is to be wound upon the bobbin H, is placed upon a pivot, P, attached to the base of the stand G, and is held down upon the said pivot by a spring, Q, with sufficient force to prevent it from turning too easily and to stop it as soon as the draft upon the thread ceases. The spring Q is attached to the stand G, and has a guide-bend, R, for the thread L formed in it about upon a level with or a little below the forward upper corner of the sheath M.

If desired, the guide R can be made separate from the spool-holding spring Q.

To the stand G is also attached a second guide, S, the bend or aperture of which is placed about opposite the center of the spool O, to prevent the thread L from running off either end of the said spool, and thus keep the

said thread upon about the said tension. The bend or opening of the guide S is made of such a size as will allow the thread to pass through easily, but too small to allow any knot upon the thread to pass through, so that, should there be a knot in the thread, the said knot will be stopped by the said guide and will cause the thread to break, so that no bobbins will be allowed to be wound upon the bobbin, to cause trouble when using the sewing-machine. With this construction, when the winder is in use, the thread gradually descends between the sheath M and the spring N. As the bobbin becomes filled the thread comes in contact with the knife K, and is cut, so that it will be impossible for the bobbin to be wound too full. By this construction as each bobbin becomes empty it can be removed from the machine and replaced by a full one. The empty bobbin can then be placed upon the spindle E and the end of the thread connected with it. Then as the machine is operated the bobbin will be filled and the thread cut off, leaving the bobbin ready for use when required.

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

1. A bobbin-winder constructed substantially as herein shown and described, and consisting of the wheel and spindle for carrying the bobbin, the knife-holder, knife, sheath, and

spring for cutting the thread, and the guides for controlling the position of the thread, as set forth.

2. In a bobbin-winder, the combination, with the wheel and spindle D E and the guides S R, of the knife K, the recessed knife-holder J, and the spring N, substantially as herein shown and described, whereby the thread will be cut automatically when the bobbin becomes full, as set forth.

3. In a bobbin-winder, the combination, with the knife K, the recessed knife-holder J, and the spring N, of the recessed sheath M, substantially as herein shown and described.

4. The combination, with the stand G, knife K, and sheath M, of the U-shaped spring N, inclined to bring its bend above the upper forward corner of the sheath and exert the proper tension on the thread, as described.

5. In a bobbin-winder, the combination, with the knife K, of the adjustable sheath M, having notch *m*, to gage the point at which the thread shall come in contact with the knife-edge, and the device adapted to wind bobbins of varying size by adjusting the sheath, substantially as described.

HENRY M. DIXON.

Witnesses:

JAMES T. GRAHAM,
C. SEDGWICK.