

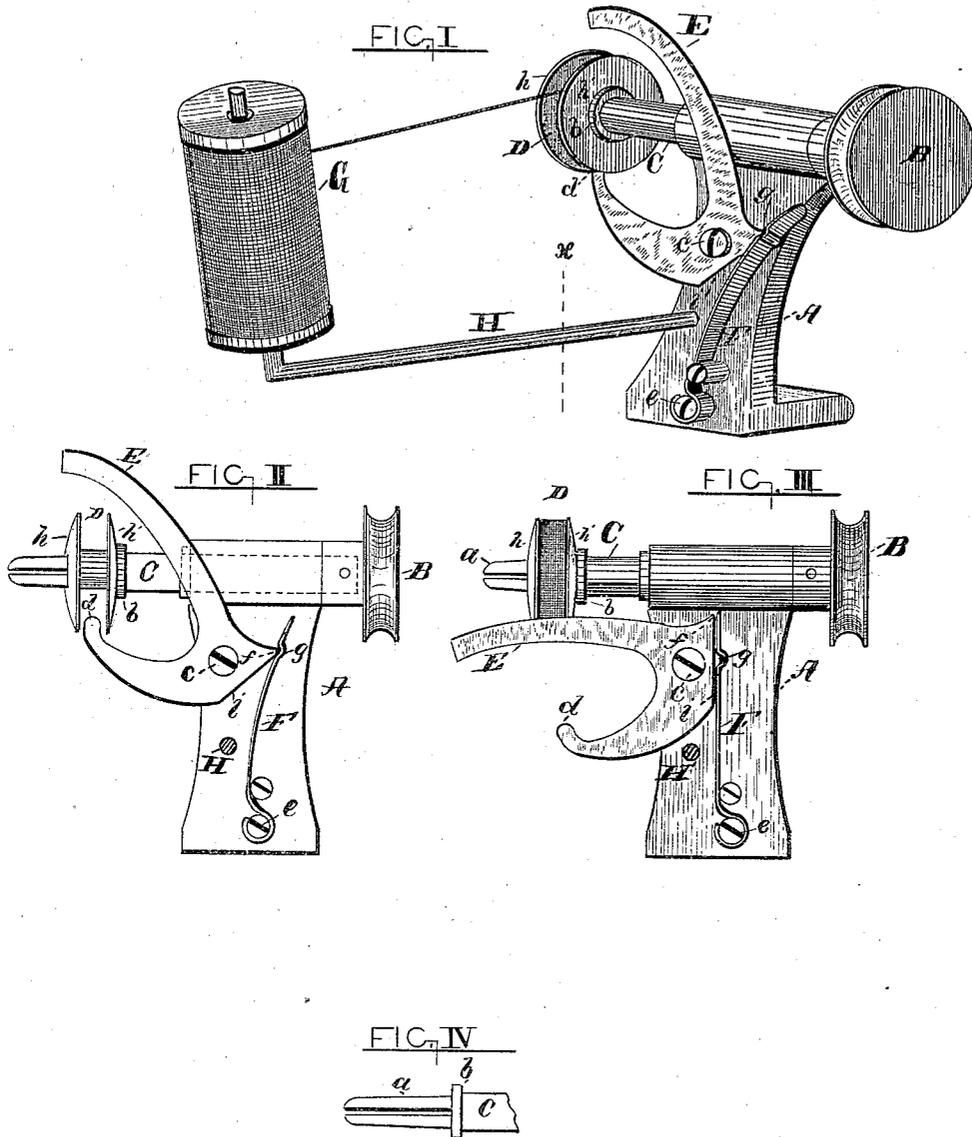
(No Model.)

A. V. ABERCROMBIE.

BOBBIN WINDER FOR SEWING MACHINES.

No. 309,371.

Patented Dec. 16, 1884.



Witnesses.
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BOBBIN-WINDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 309,371, dated December 16, 1884.

Application filed June 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER V. ABERCROMBIE, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Bobbin-Winders for Sewing-Machines, of which the following is a specification.

The object of my invention is to facilitate winding sewing-machine bobbins, enabling the operator to always find ready at hand a filled bobbin to replace the empty one, the winding being done automatically. Heretofore it was necessary to suspend operation on the machine and devote the time to winding the bobbin. With my improved method the operation of winding will be in progress while the operator is manipulating the machine, and when the bobbin is filled the connection with the delivery-spool will be automatically severed.

To more clearly understand my invention, reference is had to the drawings, and to the figures and letters of reference marked thereon, which form part of this specification.

Figure I represents a view in perspective of the device. Figs. II and III represent a front elevation of the same, with the exception that the spool attachment is removed at the point *x* of Fig. I. Fig. IV represents a broken view of the spindle.

Its construction and operation are as follows:

A is the frame or stand; B, the driving-pulley; C, the revolving spindle; D, the bobbin; E, the thread-cutter; F, the actuating-spring; G, spool of thread; H, rod supporting the same. The spindle C is rotated by the pulley B, connected by a belt to the shaft or any available part of the machine that will insure the spindle being kept in motion while the machine is running. The stand A is placed on the table or bed of the machine. The end *a* of the spindle C (see Fig. IV) is slightly tapering, and is split or forked, thus having sufficient spring to fit bobbins whose holes vary in diameter. The shoulder or collar *b* serves as a stop, and keeps the bobbin in one position during the operation of winding.

To the stand A, by means of the screw *e*, as

represented in the other figures, is secured the knife or cutter E. The cutter is provided with the finger *d*, which indicates when the bobbin is filled. The said finger is a part of the cutter, as shown, or it may be a separate attachment; but it must be connected to the cutter. The cutter is operated by the spring F, secured to the stand A by the screw *e*. The projecting point *f* of the cutter E engages with the notch *g* of the spring F, and serves to maintain the cutter in an upright position, as represented in Figs. I and II. When necessary to wind a bobbin, it is placed on the part *a* of the spindle and against the shoulder *b*. The cutter E is raised, and the finger *d* is brought between the disks *h h'* of the bobbin and a short distance within the recess. (See Fig. II.)

In place of the notch *g* of the spring and the point *f* of the cutter, a flat or straight face on the cutter to engage with the spring would undoubtedly hold; but the notch is thought more secure. The thread is brought from the spool G and attached to the bobbin in the usual manner, and the machine started. The operator will resume work on the machine, and the bobbin will continue to fill until the cop comes in contact with the finger *d*. The pressure will continue to act on the same, gradually releasing the point *f* from the notch *g* of the spring, and by the time the bobbin is filled the spring will be brought in contact with the straight face *i* of the cutter, and by the pressure of the same cause the cutter to descend rapidly and sever the thread, as represented by Fig. III. The bobbin will remain on the spindle and continue to revolve until wanted by the operator.

A device similar to frame A, having a plain spindle to hold the bobbin, is already in use on certain machines; but the thread is held and guided by the operator, making the winding of the bobbin a separate operation.

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

1. In a device for winding bobbins, the combination, with a revolving spindle adapted to hold the bobbin in a fixed position, of a movable cutter actuated by a spring, a finger connected with said cutter, and located in such relation to the bobbin upon the spindle that

the accumulating thread upon the bobbin will act against the finger and release the cutter, and by the action of the spring the cutter will descend and sever the thread, substantially
5 as set forth.

2. The stand A, the revolving spindle C, having forked end *a*, in combination with the cutter E, finger *d*, connected with said cutter, and spring F, having notch or indentation *g*,

all substantially as described, and for the purpose as set forth. 10

Signed at Bridgeport, in the county of Fairfield and State of Connecticut.

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