

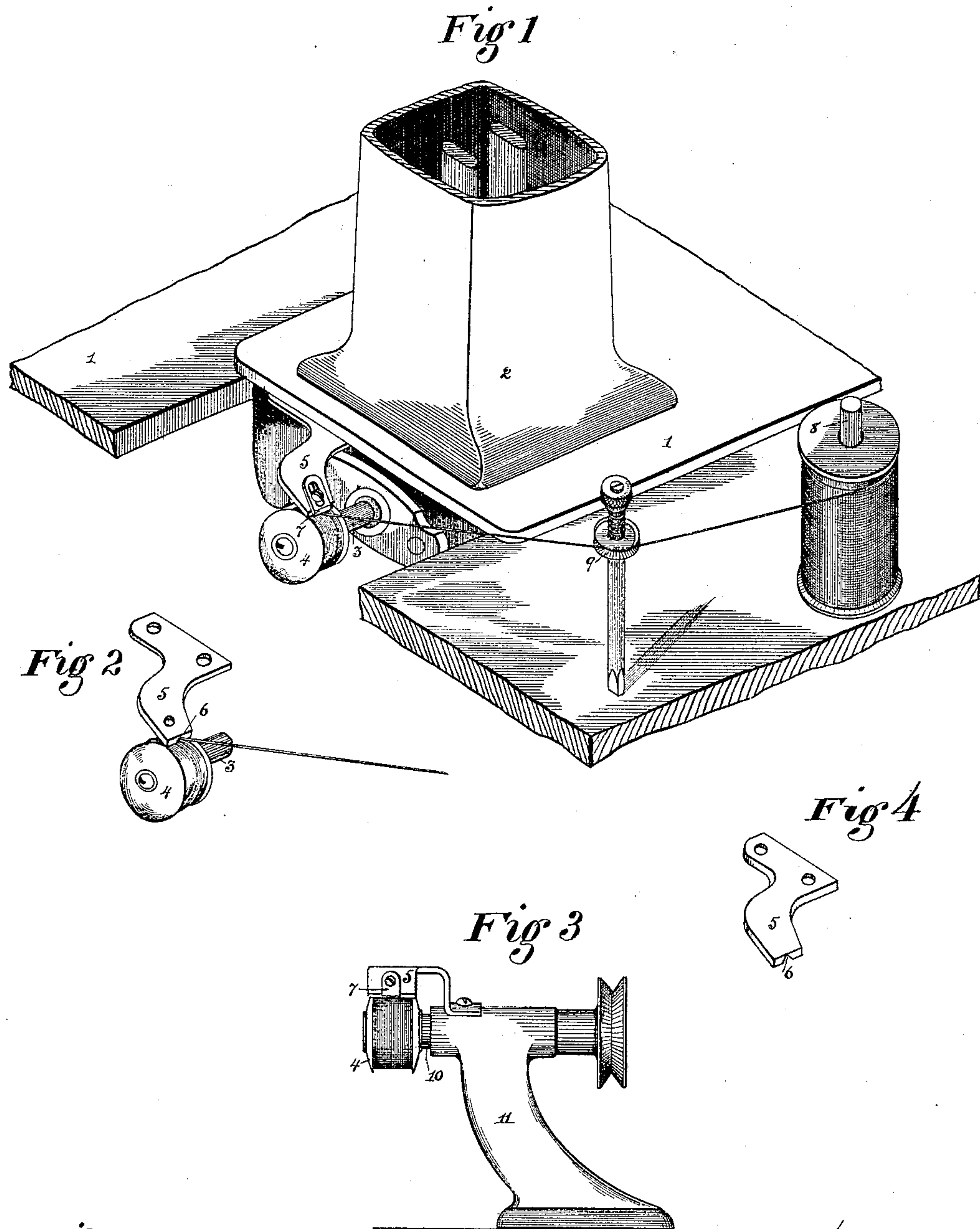
(No Model.)

J. E. NEAHR.

BOBBIN WINDER FOR SEWING MACHINES.

No. 379,593.

Patented Mar. 20, 1888.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB E. NEAHR, OF TROY, NEW YORK.

BOBBIN-WINDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 379,593, dated March 20, 1888.

Application filed July 8, 1887. Serial No. 243,727. (No model.)

To all whom it may concern:

Be it known that I, JACOB E. NEAHR, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Bobbin-Winders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in devices for winding bobbins for sewing-machines and the like, and has for its object to provide a winder which shall wind thread upon the bobbin, and when the latter is properly filled shall automatically sever the thread without the employment of any moving parts for effecting the cutting; and with these ends in view my invention consists in the details of construction, hereinafter fully set forth, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand how to make and use my improvement, I will now describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective of the arm and bed-plate of a sewing-machine, my device being shown as secured to the end of the bed; Fig. 2, a detail perspective of the guard in its proper position relative to a fully-wound bobbin, the cutter being removed and the thread shown as piled at the center of said bobbin; Fig. 3, a front elevation showing my device as applied to a belt-driven winder independent of a sewing-machine, and Fig. 4 a detail showing the cutter made with the guard.

Like figures of reference denote like parts in the several views.

1 represents the bed of a sewing-machine, and 2 the vertical portion of the arm, which latter is broken away, since its presence is not essential to the proper illustration of my device.

3 is a continuation of the main shaft of the machine, which is projected beyond the end of the bed-plate, and which is formed into a spindle for the proper accommodation of the bobbin.

4 is the bobbin.

5 is an overhanging guard, which is secured to the end of the bed-plate. The lower edge of this guard is about the width of the bobbin and is arranged to extend parallel to the periphery thereof and almost touching it. A notch, 6, is cut in the edge of this guard from the under side. (See Figs. 2 and 4.)

7 is a knife secured upon the back of the guard, and whose cutting-edge extends to or slightly below the bottom edge of said guard.

8 is a spindle, upon which the commercial spool of thread may be arranged, and 9 is any ordinary tension interposed between the spool and bobbin.

In Fig. 3, 10 is a bobbin-spindle journaled in a suitable standard, 11, said spindle being revoluble by any ordinary means—as, for instance, a belt. The standard 11 also supports the guard and cutter, which are the same, and arranged in the same manner relative to the bobbin, as in Fig. 1.

In Figs. 1 and 3 I have shown a removable knife secured upon the back of the guard; but by grinding or filing the notch itself to a sharp edge (see Fig. 4) I can entirely dispense with the knife as a separate element of my construction.

The operation of my improvement is as follows: When the thread from the commercial spool has been caught around the bobbin and the spindle caused to rotate, the said bobbin commences to take on thread, and if the spool or the tension be set at a short distance from the bobbin—say, ten inches—the thread as it is taken up will automatically traverse from side to side of the bobbin, so that the latter will be closely and evenly wound. When the bobbin is full, the thread will come in contact with the edge of the guard, and as said thread tends to wind at the point of least friction or resistance, it now winds within the notch in the under side of said guard, and thereby piles one turn upon another within said notch until the thread is forced against the knife-edge and is thereby severed. The thickness of the edge of the guard protects the thread from contact with the knife-edge, excepting at the notch, where said cutting-edge is free to come in contact with the thread as the latter piles up at the end of the winding. My device is found

very advantageous in machines used for manufacturing purposes, since the winding may be simultaneous with sewing and requires neither care nor attention from the operator. When
5 the thread has been cut, the full bobbin continues to revolve with the shaft until such time as it may be required for use, when another empty bobbin may be placed in position and started for winding while the bobbin first
10 wound is being consumed in the machine.

In this my invention I do not wish to be confined to the combination of my device with a sewing-machine, since it is obvious that it can be used to great advantage as a separate machine (see Fig. 3) and for the winding of any
15 kind of bobbin or spool.

My invention lies particularly in the combination, with the spindle for the proper support of the bobbin, of the notched guard and
20 the knife-edge arranged within the notch. In sewing-machines having no shaft beneath the bed the bobbin may be supported upon the upper shaft and the guard secured to a bracket arranged upon the arm.

I claim as my invention—

1. The combination, with the bobbin and the revoluble support whereon the latter is mounted, of the notched guard, the edge whereof is arranged in close proximity to and parallel with the periphery of said bobbin, and
25 the knife-edge located at the top of the notch, whereby the thread may be severed as it piles within the notch, substantially as set forth. 30

2. The combination, in a sewing-machine, with the main shaft, upon the end whereof a
35 bobbin may be mounted, of a downwardly-extended guard whose edge is notched and extended into close proximity to the periphery of the bobbin, and a knife adjustably secured to the back of the guard and with its edge
40 overlapping the notch, as described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB E. NEAHR.

Witnesses:

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