

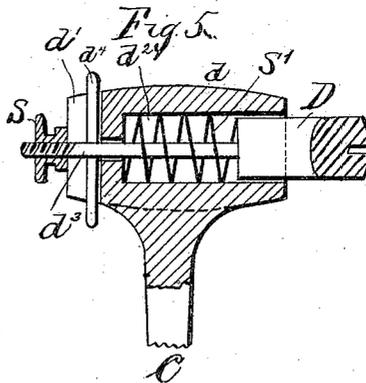
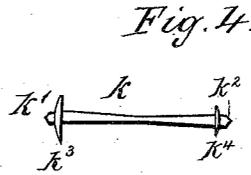
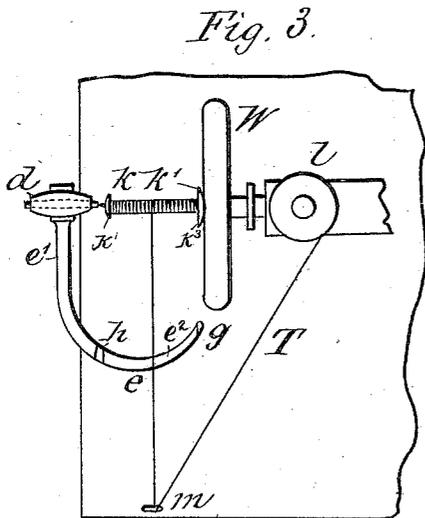
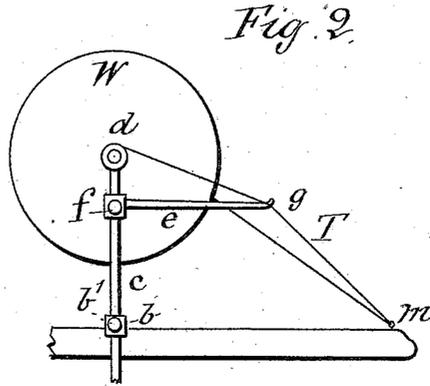
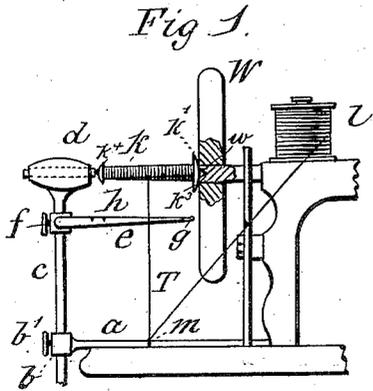
(Model.)

A. T. MOISSON.

BOBBIN WINDING ATTACHMENT FOR SEWING MACHINES.

No. 311,598.

Patented Feb. 3, 1885.



Witnesses
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UNITED STATES PATENT OFFICE.

ANATOLE T. MOISSON, OF VERNEUIL, FRANCE.

BOBBIN-WINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 311,593, dated February 3, 1885.

Application filed July 19, 1883. (Model.) Patented in France July 29, 1883, No. 150,325; in Belgium June 20, 1883, No. 45,086; in Germany June 25, 1883, No. 27,092, and in England June 26, 1883, No. 3,166.

To all whom it may concern:

Be it known that I, ANATOLE TABOUR MOISSON, a citizen of the French Republic, residing at Verneuil, in the French Republic, have invented certain new and useful Improvements in Bobbin-Winding Attachments for Sewing-Machines, (for which I have obtained Letters Patent in France, No. 150,326, dated July 29, 1882; in Belgium, No. 45,086, dated June 20, 1883; in Germany, No. 28,092, dated June 25, 1883; and in England, No. 3,166, dated June 26, 1883;) 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to bobbin or spool winding attachments for sewing-machines, whereby the spool or bobbin may be wound automatically without interruption to the operator in his work and without appreciably increasing the power required to operate the machine; and it consists in a combination of devices for obtaining the above-recited results, substantially as hereinafter fully described.

In the accompanying drawings, Figure 1 is a face view, the fly-wheel of the sewing-machine being shown in section; Fig. 2, a side elevation, and Fig. 3 a plan view, of my improved bobbin or spool winding attachment. Fig. 4 shows a bobbin or spool, and Fig. 5 is a sectional enlarged view of the spool-bearing at the upper end of the standard *c*.

The attachment is composed of a horizontal rod, *a*, adapted to be secured to the metallic plate of a sewing-machine. The outer end of the rod has a clamp or holder, *b*, in which the vertical rod *c* is secured by means of a set-screw, *b'*. The rod *c* terminates in a bearing-sleeve, *d*, for one end of the axis of the spool or bobbin on which the thread is to be wound. The sleeve *d* has formed in its rear end a vertical slot, *d'*, and has an axial aperture, *d''*, of less diameter at its rear than at its forward end, for the reception of the shank and body of a bearing-stud, D, the attenuated shank *d'''*

of which projects in rear of the sleeve *d* and carries a thumb-screw, S, at that end:

Upon the shank *d'''* of the stud D, within the enlarged portion of the axial opening of the sleeve *d*, is mounted a coiled spring, S', that provides a yielding bearing for said stud, and said shank *d'''* carries a guide-pin, *d''*, that guides the same within the slotted portion of the sleeve and holds the stud against rotation with the spool. At its forward end the stud D has a cavity for the reception of the journal *k''* of the spool or bobbin, which cavity will, when the stud D is sufficiently retracted into the bearing-sleeve *d*, form one of the bearings for said spool-journal.

It will be observed that by means of the thumb-screw the stud D may be adjusted longitudinally in the sleeve within certain limits to accommodate spools or bobbins of varying lengths, thereby giving the attachment a greater range of use. The rod *c* carries a thread-guide, *e*, adjustably secured thereon by means of a set-screw, *f*. The guide *e* is composed of a rod having a straight portion, *e'*, and a curved portion, *e''*, said curved portion having a diameter slightly greater than the length of the bobbin and terminating in a nose or vertical projection, *g*, to prevent the thread from slipping off. The guide *e* has a notch, *h*, so positioned as to lie in the plane of the end of the stud D, or practically so.

l is the spool of thread, supported, as usual, from a pin secured to the upright of the machine, and *k* is the spool or bobbin on which the thread T is being wound, said thread passing from the spool *l* through a guide-eye, *m*, thence over the curved portion of guide *e*, between the notch *h* and the guard *g*, to the spool *k*. The spool or bobbin is secured in position for winding as follows: The axis or journal of the wheel W has a central conical recess, *w*, Fig. 1, into which fits the conical end *k'* of the bobbin *k*, said end having a collar, *k''*, of greater diameter than the collar *k'* at the opposite end, *k''*. The latter end is fitted into the cavity formed in the outer end of the stud D, after proper adjustment of the said stud to the length of bobbin, by means of the set-screw S.

The operation of the device is as follows: 10

The winding attachment being secured in proper position on or to the machine the spool is fitted in its bearings by placing its journal k^2 into the cavity at the outer end of the stud D, said stud being pushed or drawn into the bearing-sleeve d sufficiently far to permit the journal k' being placed into the cavity w of the fly-wheel axis, the spool being held in position by the power of the spring d^2 exerted upon stud D, after which the thumb-nut S is screwed up to the rear face of bearing d . The spool is now ready to receive the thread, which latter is applied for winding as follows: The end of the thread T is passed through the thread-eye m , over the guide e , and clamped between the collar k^3 of the bobbin and the wheel after having been passed once around said bobbin. When the bobbin is full, the thread will pass over the smaller collar k^4 and between it and the outer face of the stud D, and at the same time into the notch h of the guide e , and will be broken off.

In Fig. 4 I have shown a bobbin the axis of which is made to taper from the collars k^3 k^4 to its center, at which point said axis is of least diameter, thus forming surfaces inclining toward each other, which serve to guide and traverse the thread properly during the operation of winding, and when such a bobbin is used the thread-guide e may be dispensed with.

Having now described my invention, what I claim is—

1. The combination, substantially as herein described, with the fly-wheel of a sewing-

machine, of the spool-winder, consisting of the standard c , terminating in a bearing, d , for one end of the spindle of a spool, the fly-wheel being provided with a bearing for the other end of said spindle, the curved thread-guide e , adjustable vertically on the standard, and the supporting-arm a , in which the standard is vertically adjustable, said parts being arranged for operation as set forth.

2. The combination, substantially as herein described, with the fly-wheel of a sewing-machine provided with a bearing for one end of a spool, of a bobbin-winding mechanism consisting of a standard, c , having at its upper end a bearing-sleeve, d , containing a yielding bearing for the other end of the spool, the guide e , secured to the standard c , and means, such as shown and described, for securing the standard to the machine.

3. The combination, substantially as herein described, with the fly-wheel of a sewing-machine provided with a bearing for the reception of one end of a spool, the rod a , the standard c , adjustable vertically on rod a and having at its upper end a yielding bearing for the opposite end of a spool, and the curved guide e , adjustable vertically on said standard, for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of June, 1883.

ANATOLE TABOUR MOISSON.

Witnesses:

LÉON SCHMITTBUEHL,
EDWARD P. MACLEAN.