W. E. BROWNING.

BOBBIN-WINDERS FOR SEWING-MACHINES.

No. 174,188. Patented Feb. 29, 1876.

Fig. 1.

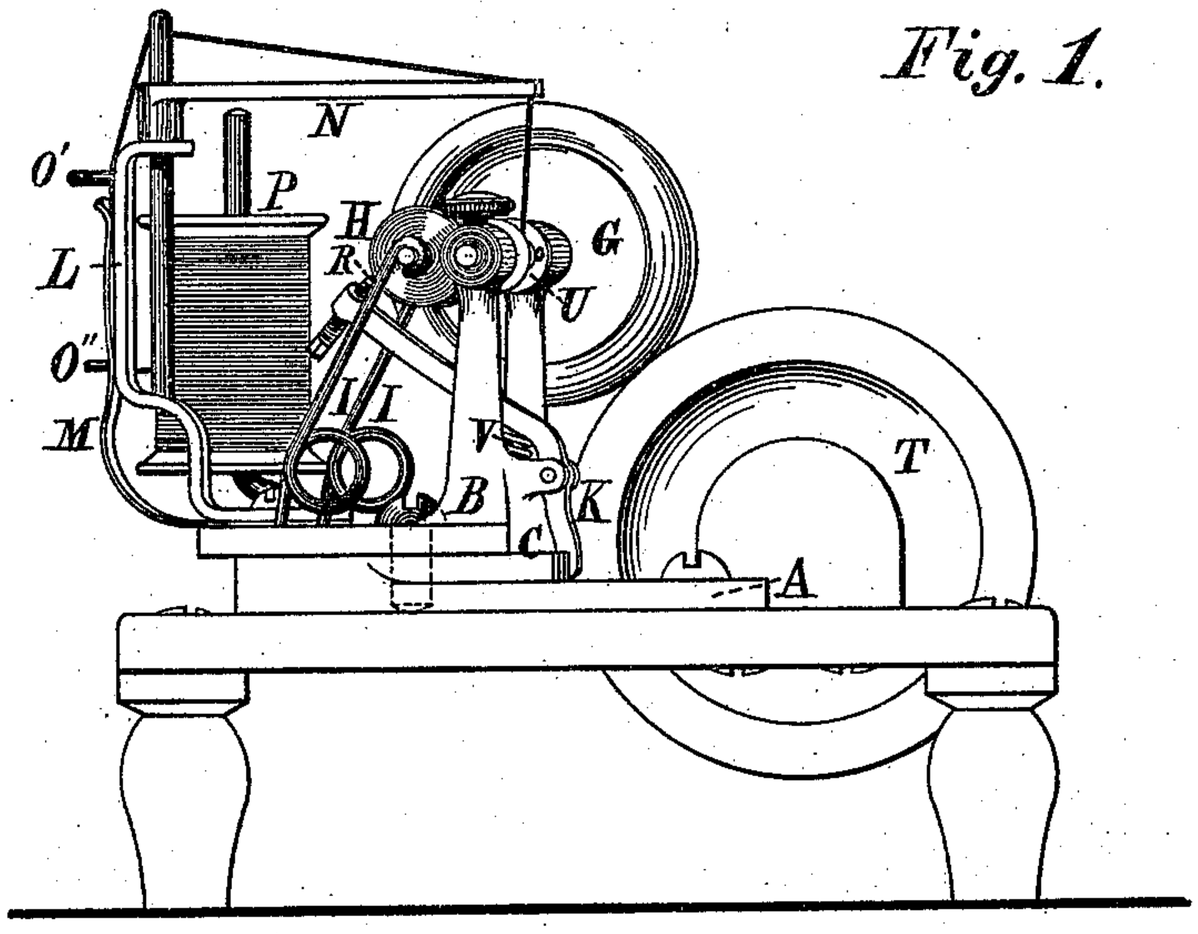
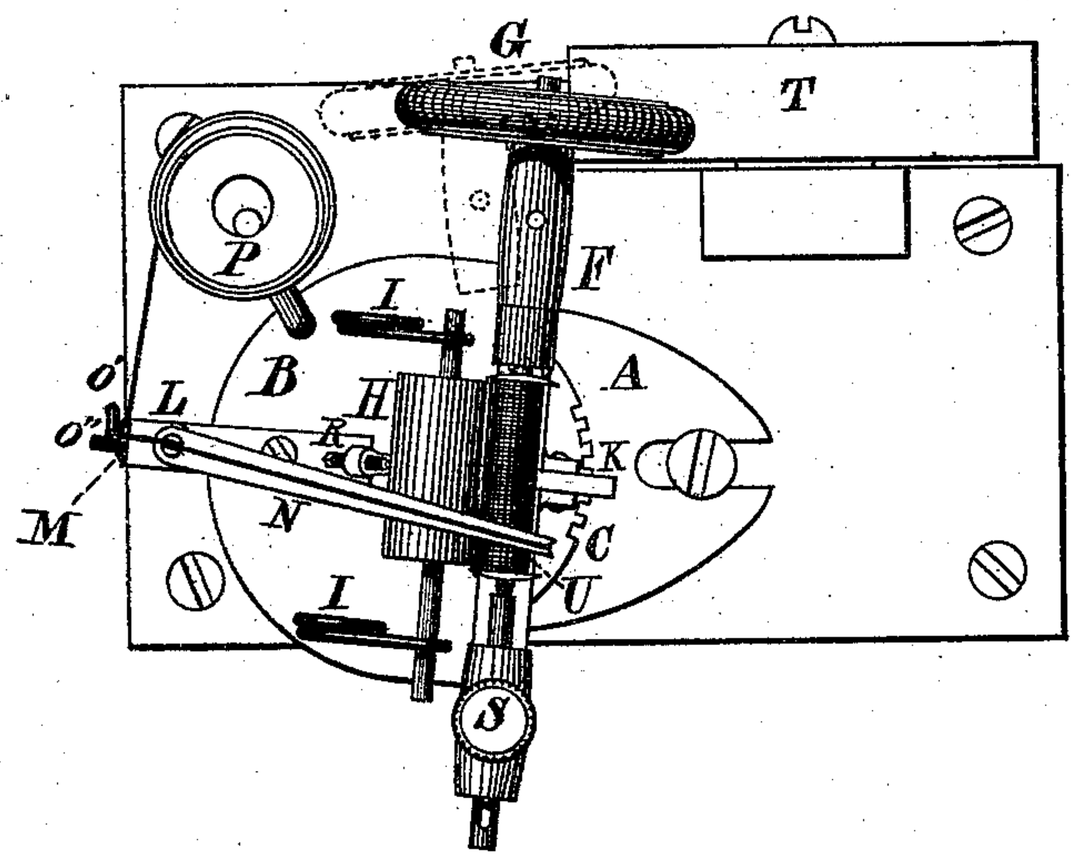


Fig. 2.



Witnesses;
Butler Smith
Henry Chase

Inventor;
W. E. Browning
by F. G. Arnold Atty.

UNITED STATES PATENT OFFICE.

WALTER E. BROWNING, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN BOBBIN-WINDERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **174,188**, dated February 22 1876; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, WALTER E. BROWNING, of Cambridge, in the county of Middlesex, State of Massachusetts, have invented a certain Improvement in Attachments for Sewing-Machines for Winding Shuttle-Bobbins, of which the following is a specification:

My invention is designed to be applied to a sewing-machine, and so placed thereon as to receive motion from some running part, to wind the thread on the shuttle-bobbin closely and evenly, and when it has filled the bobbin or wound as much as desired, it will release itself automatically and stop, and to do this winding and stopping without the necessity of any attention of the operator after being set and started, leaving the whole attention to be applied to the sewing, thus saving time and winding a compact, even bobbin, and getting the most thread possible on it, the spring-bearings I I being independent of each other, and so arranged as to yield independently as the thread begins to wind at the end of the bobbins, the roll H yielding at that end only, the other being held by its spring until the turns of the thread reach near the middle, the ends of the roll alternately acting the same as the thread winds from each end, this tilting of the roll H pressing the turns together, forming close winding at the ends.

Its nature consists in the use and application of the devices described below.

The accompanying drawings show two views of a bobbin-winding attachment embodying my invention.

Figure 1 is a side view. Fig. 2 is a plan or view from above.

The same letters indicating the same parts wherever they occur.

A is a plate, to be fastened to the sewing-machine in such position that the wheel G may receive motion from some running part. B is a stand or frame pivoted on the plate A, and held in position by the spring-lever K, holding in the notches in plate C, fastened to A, the spring V acting on the lever K.

The stand B supports the bobbin-carrier F and its driving-wheel G, and also the standard L, which has suitable bearings, in which the free lever N turns, and the spring M, which, with the guides O′ and O″, form a tension or friction on the thread, which passes from the spring M over the guides O, and, at the end of N, down to the bobbin U, the spool of thread being shown at P.

H is a roll swinging freely in its spring-bearings I I, which support and press it against the bobbin U, or the thread being wound thereon, said roll H filling the bobbin between the heads, and being driven by the thread on it.

The end of the lever K is carried under and partly back of the roll H, and has a set-screw, R, by means of which the roll H, when pressed back by the thread on the bobbin, when filled, will depress that end of lever K, and release the other end from the notch in C, when the friction and momentum of the wheel T will throw the wheel G off to the position shown in broken lines in Fig. 2, turning the stand B and stopping the winding automatically, the screw R being set to fill the bobbin more or less, as desired, the wheel T representing the running part of a sewing-machine.

To use the winder, the thread is passed under M, and, by the guides O″ O′ O and N, down to the bobbin in F, and, depressing the upper end of K, the stand B is turned on its pivot until the wheel G presses against T, then the lever K is allowed to pass into a notch in C, and the screw R is set so that the roll H will touch it when the bobbin is full, or has as much on it as is desired. The operator may then attend to the sewing and running the machine. The winding proceeds until the roll H hits the screw R and releases K, when the wheel G is thrown clear of the wheel T, and the winding stops, the springs I I acting jointly and separately, as the thread may require, and the lever N being guided and governed by the thread as it winds, passing from end to end, alternately, of the bobbin.

What I claim as my invention is—

1. The set-screw R, roll H, and lever K,

in combination with the pivoted stand B and plate A, provided with notches, as shown and set forth.

2. In a winding attachment for sewing-machines the combination, with the roller H and axle, of the independent spring-bearings I I, secured to the plate B, whereby the roller H is made to tilt automatically from end to end, as the bobbin fills with thread.

WALTER E. BROWNING.

Witnesses:

HENRY W. HENDRICK,

J. G. ARNOLD.