

(No Model.)

G. SCHEIBLER.

MACHINE FOR WINDING BOBBINS.

No. 344,681.

Patented June 29, 1886.

Fig. 1.

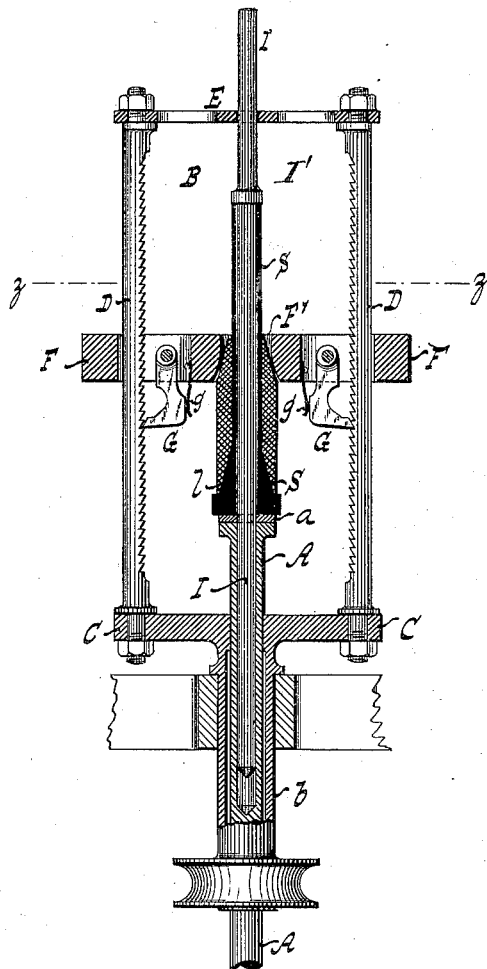


Fig. 2.

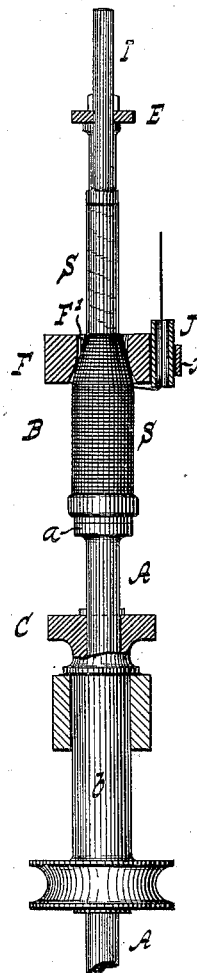


Fig. 3.

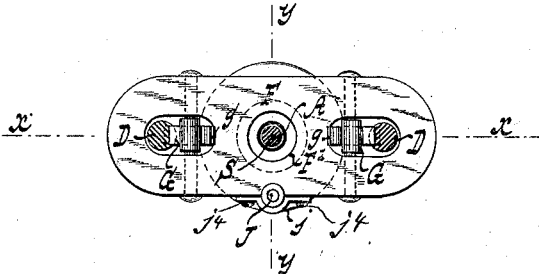
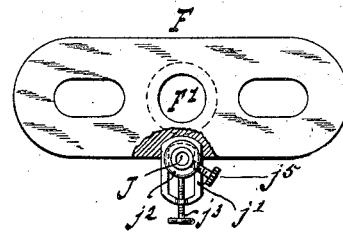


Fig. 4.



Witnesses:

*Alfred du Paur*  
*William Miller*

Inventor:

*Guido Scheibler.*  
by *Van Santvoord & Haupp*  
his Attorneys.

# UNITED STATES PATENT OFFICE.

GUIDO SCHEIBLER, OF CREFELD, PRUSSIA, GERMANY.

## MACHINE FOR WINDING BOBBINS.

SPECIFICATION forming part of Letters Patent No. 344,681, dated June 29, 1886.

Application filed March 11, 1886. Serial No. 194,866. (No model.) Patented in Germany December 12, 1883, No. 27,514.

*To all whom it may concern:*

Be it known that I, GUIDO SCHEIBLER, a citizen of the German Empire, residing at Crefeld, Prussia, in the German Empire, have invented  
5 new and useful Improvements in Machines for Winding Bobbins, (for which I have obtained Letters Patent in the German Empire, No. 27,514, bearing date December 12, 1883,) of which the following is a specification.

10 This invention has for its object to provide novel means for winding yarn or other thread upon bobbins; and it consists in the combination of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

15 Figure 1 is a vertical section in the plane  $xx$ , Fig. 3, of devices embodying my invention, some of the parts being in elevation. Fig. 2 is a vertical section thereof in the plane  $yy$ , Fig. 3, some of the parts being in elevation. Fig. 3 is a horizontal section in the plane  $zz$ , Fig. 1. Fig. 4 is a plan view of modified detail parts.

Similar letters indicate corresponding parts.

25 In the drawings, the letter A designates the spool-bearing spindle, to which a rising and falling motion is imparted in the usual manner.

30 B is the flier, which rotates about the spool-bearing spindle as an axis. Motion is imparted thereto by means of belt, gear, friction, or othersuitable connection with a driver. The spindle  $b$  of the flier carries at its top a face-plate, C, which serves as a base for toothed  
35 posts or racks D D, Fig. 1, which are bolted thereto and steadied by means of a bridge, E, extending across their top ends. A guide-board, F, encompasses these racks D D and pent therefrom are paws G G, Figs. 1 and 3,  
40 which are in proper positions to engage, respectively, with the racks so that the guide-board can have only a rising motion, any retrograde motion thereof being prevented by the engagement of the paws with the racks.  
45 To insure a constant engagement of the paws with the racks, the former may be subjected to the action of springs  $g g$ , Fig. 1, which are secured to the guide-board.

50 The bobbin S may be secured to the spindle A by any suitable means; but, as shown in the drawings, the same is secured thereto by a

friction-plate,  $a$ , and its axis is held in a straight line by a removable rod, I, which extends downward into a hollow portion of the bobbin-bearing spindle, and is guided in the bridge  
55 E. A shoulder, I, on this rod I bears upon the top of the bobbin. The guide-board is provided with means for guiding the thread to the bobbin, which consists of a tube, J, secured to the guide-board by a clamp,  $j$ . This  
60 tube is movable with the guide-board, as hereinafter explained, and may be laterally adjustable as shown in Fig. 4, such adjustability being effected by the use of a yoke,  $j'$ , which is secured to the guide-board, and a  
65 slide,  $j''$ , which carries the guide-tube J and can be moved back and forth in its bearings by a screw,  $j'''$ , which is socketed to the slide  $j''$  and engages a nut in the yoke.

The guide-board, for a reason presently to  
70 be explained, is provided with a central hole or cavity, F', the diameter of which at its base is nearly equal to the diameter of the bobbin after being filled.

75 The bobbin S is provided with a conical portion,  $l$ , Fig. 1, at that end nearest the spindle A, and in the use of the machine the free end of the thread is attached to a point on the base line of the cone, and the spindle A is caused to rise and fall through a space  
80 equal to the height of this cone after the guide-board F has been brought in its lowest position. As the bobbin falls with the spindle, one layer of thread is wound upon the cone, and in rising the lowest portion of this layer  
85 engages the edge of the guide-board and raises the same a trifle, the guide-board being held in its raised position by the paws G G. The hole or cavity F' in the guide-board, it will be  
90 observed, is necessary to allow the thread-cone to move upward, so that the lowest portion of the last layer or the top of the cylinder gradually formed by the convolutions of thread may engage the guide-board. As the guide-  
95 board is thus successively raised by the contact with the convolutions of the thread the thread-guide is carried therewith, and consequently successive outer or final convolutions  
100 will be formed, which in turn will raise the guide-board until the bobbin is filled.

It will be observed that only each successive convolution of the proper diameter—that is to

say, of a diameter corresponding to the thickness to which the bobbin is to be filled—operates the guide-board.

The guide-tube J is adjustable lengthwise through the guide-board F, and it is held in its adjusted position by any suitable means—such, for example as the clamp *j*, Figs. 1 and 3—which can be loosened by unscrewing its attaching-screws *j*<sup>1</sup>, to permit the lengthwise adjustment of the tube, after which the screws are tightened to cause the clamp *j* to securely hold the tube between said clamp and the guide-board. Where the construction shown in Fig. 4 is adopted, the tube can be secured in its lengthwise adjustment by a set-screw, *j*<sup>3</sup>, tapped through the tubular slide *j*<sup>2</sup>, to bind against the guide-tube.

By depressing the guide-tube J the diameter of the winding is increased, and vice versa.

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

1. The combination, with a rising and falling bobbin-bearing spindle, of a rotating flier, a vertically-movable guide-board carried by the flier and provided with a conical cavity through which the bobbin passes, and a thread-guide on the guide-board, substantially as described.

2. The combination, with a rising and falling bobbin-bearing spindle, a rotating flier provided with an attached spindle through which the bobbin-bearing spindle passes, and

provided with vertical guide-posts, a vertically-movable guide-board arranged on said posts and provided with a conical cavity through which the bobbin passes, means, substantially as described, for preventing a retrograde movement of the guide-board, and a thread-guide on the latter, substantially as described.

3. The combination, with a rising and falling non-rotating spindle, of a rotating flier, posts on the flier provided with ratchet-teeth, a guide-board on the posts having a conical cavity, and pendent pawls on the guide-board engaging the ratchet-teeth, substantially as described.

4. The combination, with the rising and falling non-rotating spindle, of the tubular rotary spindle and the plate secured thereto, the upright posts having ratchet-teeth, the bridge connecting the upper ends of the posts, the guide-board having a conical cavity, pendent pawls on the guide-board, the rod for holding the bobbin, and means for securing the bobbin to the non-rotating spindle, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GUIDO SCHEIBLER. [L.S.]

Witnesses:

FR. WINNATZ,  
WILH. ELBERS.