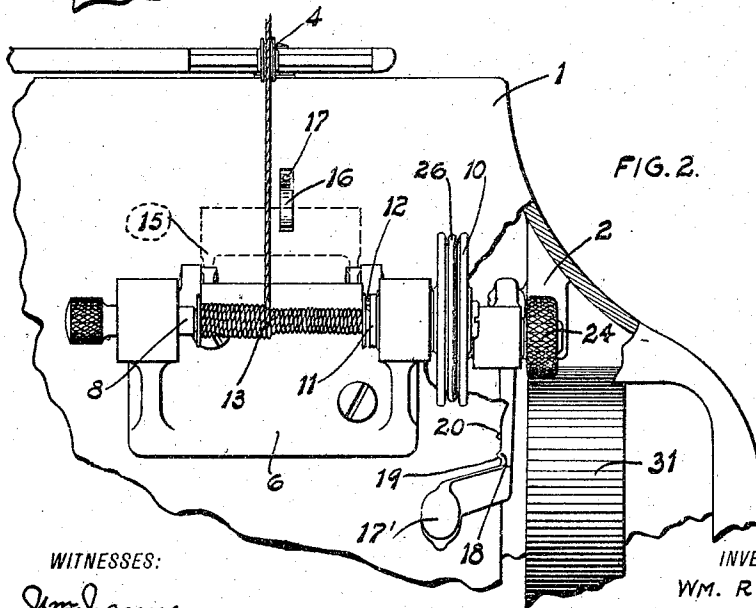
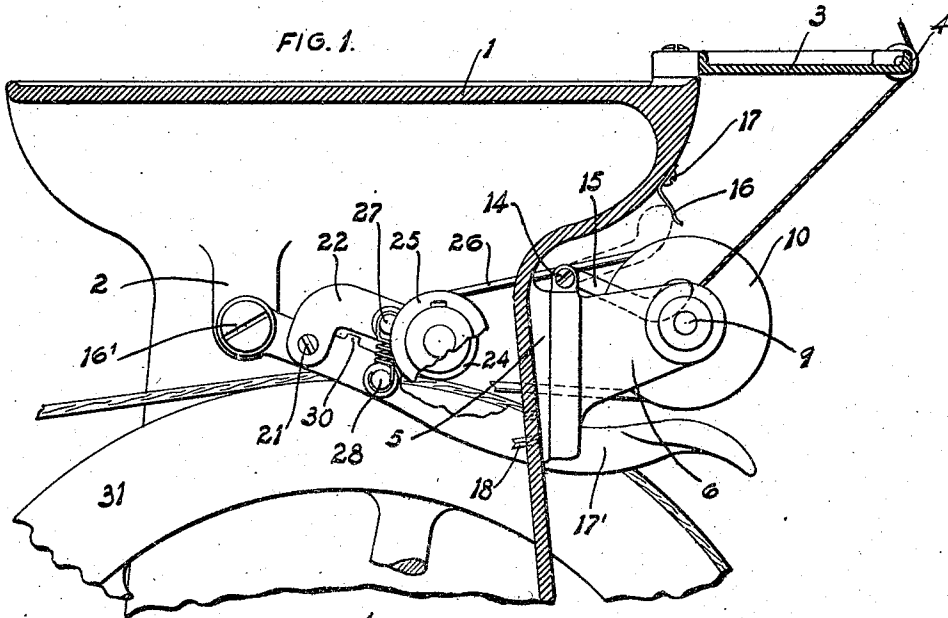


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BOBBIN WINDER FOR SEWING MACHINES.  
APPLICATION FILED JUNE 24, 1910.

1,000,577.

Patented Aug. 15, 1911.  
2 SHEETS—SHEET 1.



WITNESSES:

*Wm. Janus.*  
*E. M. Harrington.*

INVENTOR

WM. R. BLAIR

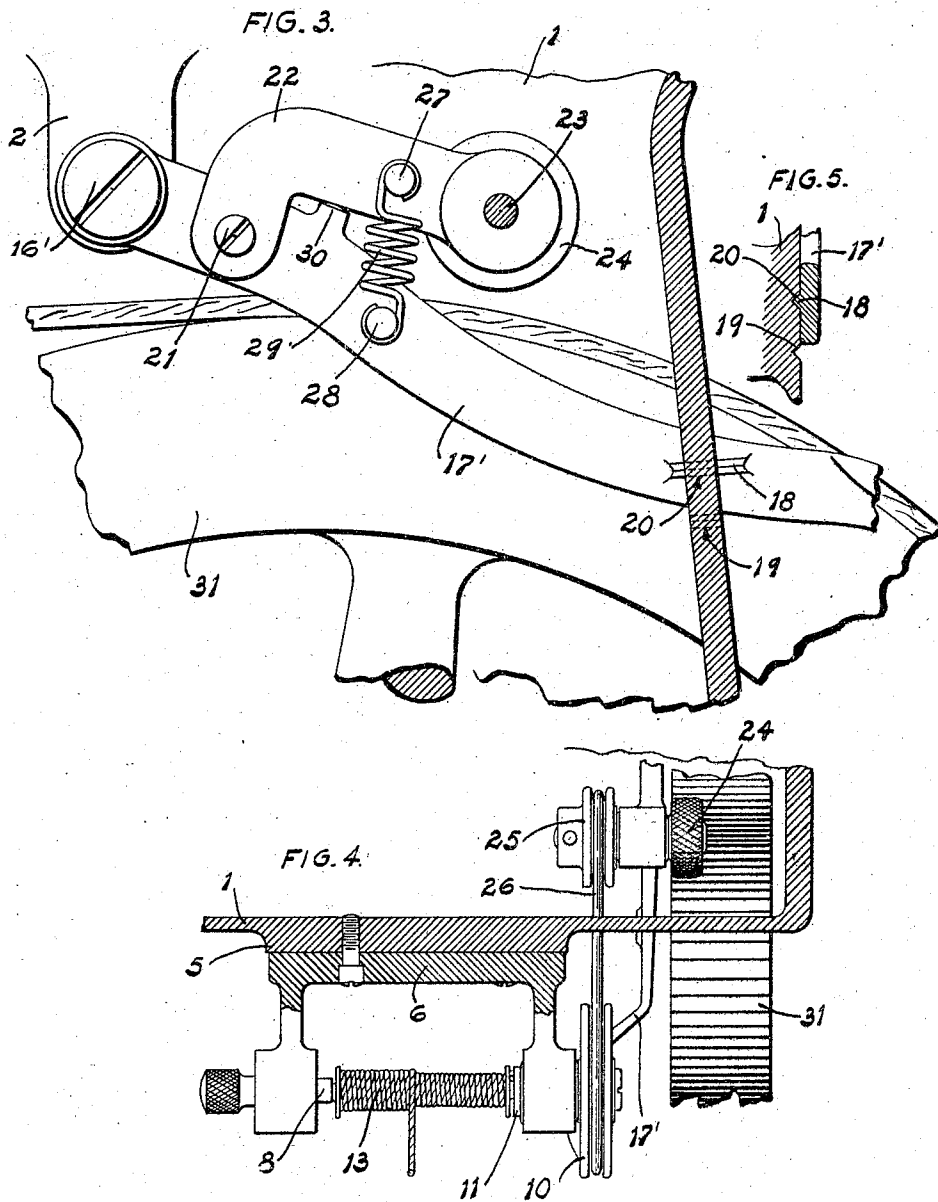
BY

*J. R. Cermack.*  
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# UNITED STATES PATENT OFFICE.

WILLIAM R. BLAIR, OF ST. LOUIS, MISSOURI, ASSIGNOR TO LANDIS MACHINE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

BOBBIN-WINDER FOR SEWING-MACHINES.

1,000,577.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed June 24, 1910. Serial No. 568,730.

To all whom it may concern:

Be it known that I, WILLIAM R. BLAIR, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Bobbin-Winders for Sewing-Machines, of which the following is a full, clear, and exact description, 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, forming part of this specification, in which—

Figure 1 is a side elevational view showing my device applied to the standard of a sewing machine. Fig. 2 is a front elevational view thereof. Fig. 3 is an enlarged view similar to Fig. 1, with certain parts removed. Figs. 4 and 5 are detail views.

This invention relates to a new and improved form of bobbin winder, which is especially adapted for attachment to the frame of an ordinary sewing machine, but may or can be used in connection with any machine having a rotary element.

The object of my present invention is to provide a simple frictionally driven means for rotating the bobbin as the thread is wound thereupon.

With this object in view my invention consists in the construction, arrangement and combination of the various parts of my device as are to be herein described, and hereafter pointed out in the claims.

In the drawings, 1 indicates the ordinary machine frame or standard, and 2 a boss thereon.

3 is a piece attached to and extending from the frame 1, and having a guide roller 4 at the end thereof. The frame 1 is also provided with a seat 5 upon which is bolted a bracket 6 having an adjustable bearing point 8 mounted in a boss on one end thereof. In a boss on the bracket 6 and opposite the bearing point 8 is a rotary spindle 9 having at one end thereof a pulley 10, and at the other end a shoulder 11 with an opening therein to receive the tapered end of the bobbin, and also a pin 12 projecting therefrom for rotating the bobbin 13. Between the bearing point 8 and the shoulder 11 is mounted the bobbin 13 which is to be wound. Attached at the points 14 on the bracket 6 is a pivoted weighted thread presser 15 which is shaped in the form of a yoke, as illustrated in dotted lines in Figs.

1 and 2, the arms of which are connected to the pivot points 14 on the bracket 6. The body of the yoke piece 15 is made large to have plenty of weight.

16 is a small flat spring attached to the frame 1 at 17, and is adapted to be sprung out from the frame 1 when the yoked piece 15 is raised, and forms a holding device to retain the element 15 in the dotted line position shown in Figs. 1 and 2.

Mounted on a pivot 16' in the lug 2 is a hand lever 17' having a triangular projection thereon at the point 18. Where this lever projects through the frame 1 this frame has several notches 19 and 20 formed therein in which the projection 18 may be engaged. In proximity to the stud 16' is a stud 21 mounted on the lever 17' to form a bearing point for lever 22 of L-shape. In one end of this lever is mounted a spindle 23 having on opposite ends thereof a friction roller 24, and a drive pulley 25. A belt 26 runs around the pulleys 10 and 25 and on the lever 22 is mounted a post 27 which is connected with a post 28 on the lever 17' by means of an expansible helical spring 29. Coöperating with the lever 22 is a stop lug 30 on the upper side of the lever 17'.

The operation of the device is as follows: The thread passes under the roller 4 to and around the bobbin 13. The thread presser 15 is removed from the holder 16, and is held by gravity in engagement with the thread in order to prevent the slack of the thread from piling up on the bobbin, and allows the thread to be neatly wound in layers thereon. When the operator moves the hand lever 17' into the position shown in Fig. 1 the lug 18 is engaged in the lower notch 19 of the frame 1, due to the spring action of the lever which is made of thin flexible material. By this movement of the lever 17' the lever 22 is moved downward by means of the spring 29 so that the friction roll 24 is brought into engagement with the driving wheel 31 of the machine and is rotated thereby. The rotation of this friction roll 24 operates the belt 26 and causes the pulley 10 to rotate which in turn rotates the bobbin 13. The spring 29 allows the proper tension of the roller 24 when brought into contact with the driving wheel 31. After the bobbin has been fully wound the lever 17' is manually released from the notch 19 in the frame, and moved upward until

the projection 18 engages the upper notch 20, in which position the stop 30 is brought into engagement with the lever 22 to remove the roller 24 from contact with the drive wheel 31.

I am aware that minor changes in the construction, arrangement and combination of the various parts of my improved device can be made and substituted for those herein shown and described without departing from the nature and spirit of my invention, the scope of which is indicated by the accompanying claims.

I claim:

15 1. A bobbin winder comprising a support for the bobbin, a rotary element connected thereto, a lever, a driving mechanism mounted thereon and operatively connected to the rotary element, said lever being provided with a projecting portion adapted to engage a notch in the bobbin support to hold the lever in operative position.

20 2. A bobbin winder comprising a frame, a support for the bobbin mounted on the frame having a rotary element connected thereto, a hand lever pivoted to the frame, and a second lever pivoted to the hand lever having a driving mechanism mounted thereon operatively connected to the rotary element.

30 3. A bobbin winder, comprising a support for the bobbin, a rotary element connected thereto, a lever pivoted to the frame of the machine, a second lever pivoted to the first lever, a spring connected to both levers, a driving mechanism mounted on the second lever, and operably connected to the rotary element.

40 4. A bobbin winder, comprising a support for the bobbin, a rotary element connected thereto, a lever pivoted to the frame of the machine and having a stop lug thereon, a

second lever pivoted to the first lever, and having a driving mechanism mounted thereon, operatively connected to the rotary element, and a spring connected to both levers.

50 5. A bobbin winder, comprising a support for the bobbin, a rotary element connected thereto, a shaft, a driving wheel and a friction wheel mounted thereon, a belt connection between the driving wheel and the rotary element, and means for moving said shaft to bring the friction wheel into contact with a driving mechanism.

60 6. A bobbin winder comprising a frame, a support for the bobbin mounted on the frame, a rotary element connected to the support, driving means mounted on the frame, a lever pivoted to the frame above said driving means, operating means on the lever connected to the rotary element, and means on the lever adapted to retain the lever with the operating means in contact therewith.

65 7. A bobbin winder comprising a frame, a support for the bobbin mounted thereon, a rotary element connected to the support, driving means mounted on the frame, a lever pivoted to the frame above said driving means, operating means on the lever connected to the rotary element, and a projection on the lever adapted to engage notches on the frame to retain the lever with the operating means in contact or out of contact with the driving means.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 21st day of June, 1910.

WILLIAM R. BLAIR.

Witnesses:

M. P. SMITH,  
J. W. CLIFT.

BEST AVAILABLE COPY