

No. 655,877.

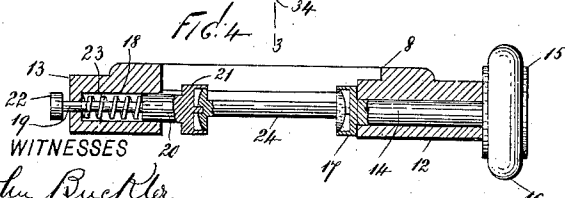
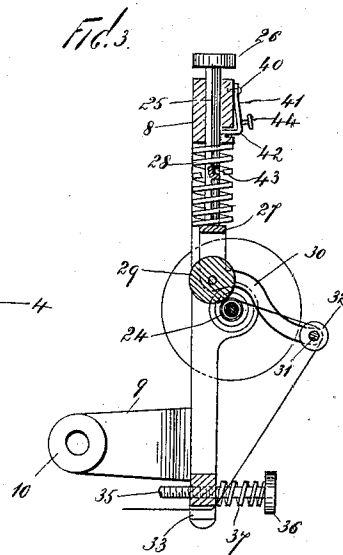
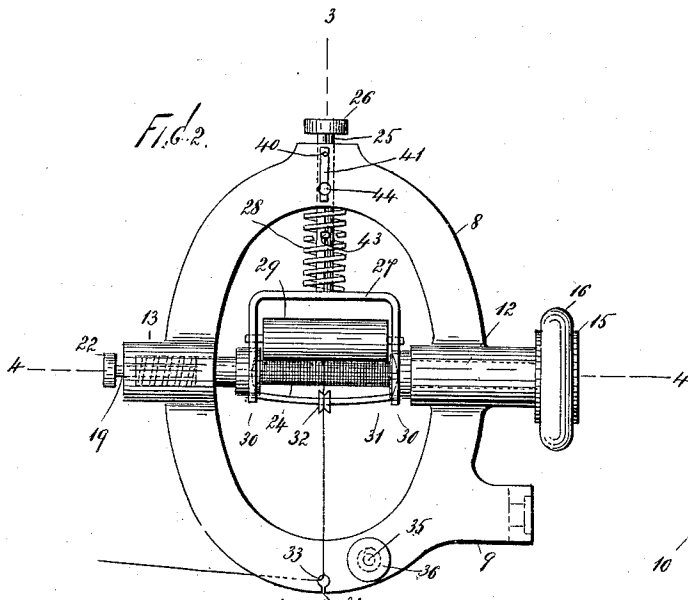
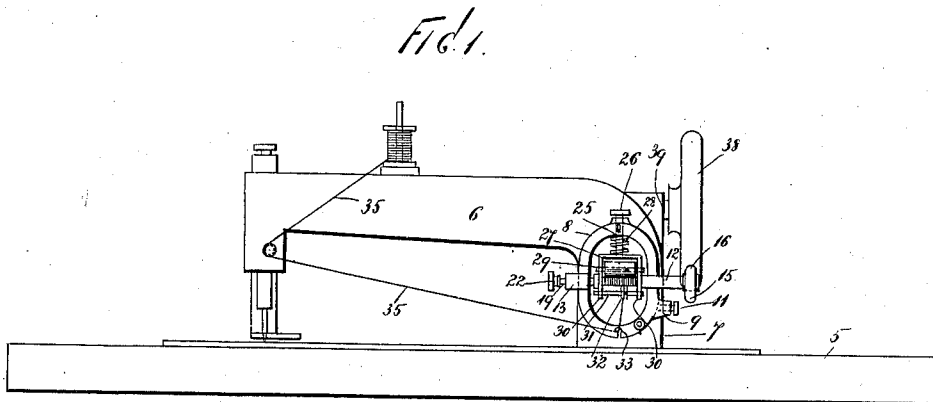
H. KISSEL, JR. & G. NAGEL.

Patented Aug. 14, 1900.

BOBBIN WINDER.

(Application filed May 24, 1899.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

HENRY KISSEL, JR., OF UNION HILL, AND GEORGE NAGEL, OF GRAND VIEW, NEW JERSEY.

BOBBIN-WINDER.

SPECIFICATION forming part of Letters Patent No. 655,877, dated August 14, 1900.

Application filed May 24, 1899. Serial No. 718,017. (No model.)

To all whom it may concern:

Be it known that we, HENRY KISSEL, Jr., residing at Union Hill, in the county of Hudson, and GEORGE NAGEL, residing at Grand View, in the county of Bergen, State of New Jersey, citizens of the United States, have invented certain new and useful Improvements in Bobbin-Winders, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bobbin-winders for sewing-machines; and the object thereof is to provide an improved device of this class by means of which the thread may be evenly and compactly wound on the shuttle-bobbin; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts herein-
after described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of a sewing-machine provided with our improved bobbin-winder; Fig. 2, a similar view of the bobbin-winder detached; Fig. 3, a section on the line 3 3 of Fig. 2, and Fig. 4 a section on the line 4 4 of Fig. 2.

In the drawings forming part of this specification the separate parts of our improvement are designated by the same numerals of reference in each of the views, and in said drawings, reference being made to Fig. 1, we have shown at 5 the table of an ordinary sewing-machine and at 6 the horizontal arm of the machine, through which the drive-shaft passes and which is connected with the table by an angular portion 7 at the end thereof.

In the practice of our invention we employ a frame 8, which is preferably elliptical in form and is provided at its lower right-hand corner with an arm 9, having a backwardly-directed shoulder or projection 10, through which passes a screw 11, by which the frame 8 is connected with the upright or angular portion 7 of the arm 6 of the machine. The frame 8 is provided at its opposite sides with tubular bearings 12 and 13, and mounted in the tubular bearing 12 is a short shaft 14,

provided at its outer end with a pulley-wheel 15, having a rubber rim 16, and the shaft 14 is provided at its inner end with a cup-shaped head 17. The bearing 13 is provided with a longitudinal chamber 18, which opens inwardly and in which is mounted a plunger-rod 19, provided at its inner end with a plunger 20 and a cylindrical cup-shaped head 21, and the outer end of the rod 19 is provided with a head, and mounted on the rod 19 in the chamber 18 is a spiral spring 23. The spring 23 operates at all times to force the head 21 of the rod 19 inwardly, and the heads 21 and 17 of the rod 19 and shaft 14 serve as holders for the bobbin 24, which may be placed in position or removed from position by pulling the rod 19 outwardly, as will be readily understood.

Passing through the upper end of the elliptical frame 8 is a plunger-rod 25, provided with a head 26 at its outer end and at its inner end with a yoke-shaped frame 27, between which and the frame 8 is a spiral spring 28, and the yoke-shaped frame 27 carries a roller 29 and is provided at its opposite ends with forwardly and downwardly curved arms 30, which support a rod 31, on which is placed a small pulley-wheel 32.

The bottom portion of the frame 8 is provided with an eye or opening 33, which opens outwardly by means of a slot 34, and in practice the thread is passed through said eye or opening or into said eye or opening, as shown in Figs. 1, 2, and 3, and carried upwardly over the pulley-wheel 32 and connected with the bobbin 24 in the usual manner.

The pulley-wheel 32 slides freely on the rod 31 and the roller 29 presses gently on the bobbin 24 in the operation of winding the thread on the bobbin. The roller 29 is of substantially the same length as the bobbin between the heads thereof, and the thread is thus caused to be wound on the bobbin in continuous layers, extending from one end to the other, the winding of the thread on the bobbin being similar to that of the winding of a thread on a spool. The thread is thus evenly and compactly wound, which facilitates the removal of the thread from the bobbin in the operation of sewing.

Passing through the bottom portion of the frame 8 is a screw 35, provided with a head 36, which is directed outwardly, and between which and the frame is preferably mounted
 5 a spring 37, which operates to tilt the frame 8, so as to disconnect the wheel 16 from the driving-wheel 38 when the screw 36 is turned or backed off. When the frame is connected with the machine, as shown and described,
 10 it may be turned or tilted on the screw or bolt 11, and when the top of the frame is turned backwardly the wheel 15 or rubber perimeter thereof will bear on the wheel 38, which is connected with the drive-shaft 39 of
 15 the machine, and the bobbin-holding shaft 14 will be rapidly revolved and with it the rod 19 and the bobbin 24.

The connection of the frame 8 with the machine is such that the upper part of said
 20 frame will tilt outwardly or forwardly, so as to disconnect the wheel 15 from the wheel 38, and whenever it is desired to wind the bobbin the screw 36 is turned and forced inwardly against the part 7 of the machine.
 25 This operation forces the lower part of the frame outwardly and the upper part inwardly and brings the wheel 15 into contact with the wheel 38.

The plunger-rod 25 is angular in cross-section, so as to prevent it from turning in the
 30 frame 8, and secured to the frame 8 at 40 is a spring 41, provided with an angular extension 42, which passes through a corresponding hole or opening in the frame 8 and is
 35 adapted to enter a notch or recess 43 in the shaft 25, the object of this construction being to provide means for holding the frame or support 27 of the roller 29 in a withdrawn position, so that said roller will not bear on the
 40 bobbin. The spring 41 is also provided with a projecting knob 44, by means of which it may be drawn outwardly, so that the plunger-rod 25 may be moved in the frame 8 and the roller 29 withdrawn from the bobbin when
 45 desired. It will be understood, however, that the normal position of the roller 29 when the bobbin is being wound is that shown in Fig.

2, in which position said roller bears on the bobbin.

The entire device is simple in construction 50 and operation and comparatively inexpensive, and although we have shown and described the frame 8, the method of connecting the bobbin therewith, and the method of connecting the frame with the machine, and the 55 screw 35, and described the same in detail, these parts form no part of our invention, which is limited to the spring-operated frame 27, the roller 29, mounted thereon, and the pulley-wheel slidably mounted on the rod 31, 60 which is supported by the frame 27.

Having fully described our invention, we claim as new and desire to secure by Letters Patent—

In a device of the class described, a rigid, 65 open, continuous-sided frame, a bobbin-holder arranged at each side thereof and directed inwardly of said frame, one of said bobbin-holders being provided with a drive-shaft journaled in said frame, a yoke-shaped spring- 70 projected support, a plunger-rod slidably mounted in said frame and by means of which said yoke-shaped support is arranged in said frame parallel with said bobbin-holders, a roller mounted in said yoke-shaped support 75 and arranged to bear on a bobbin supported by said bobbin-holders, said support being also provided at its opposite ends with outwardly-directed arms, a rod by which said arms are connected, and a pulley loosely 80 mounted on said rod and over which the thread is passed; whereby a yielding pressure of the roller and a corresponding yielding feed of the thread are insured, substantially as shown and described. 85

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 23d day of May, 1899.

HENRY KISSEL, JR.
 GEORGE NAGEL.

Witnesses:

F. A. STEWART,
 K. E. LANGTRY.