

A. W. Todd
Spooling Mach.

N^o. 46,955.

Patented Mar. 21, 1865.

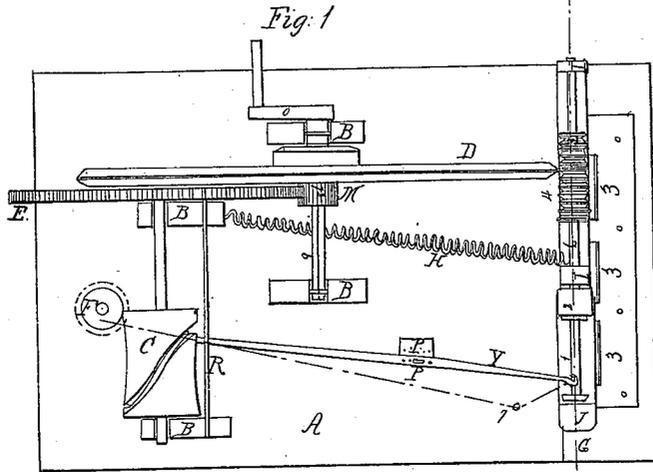
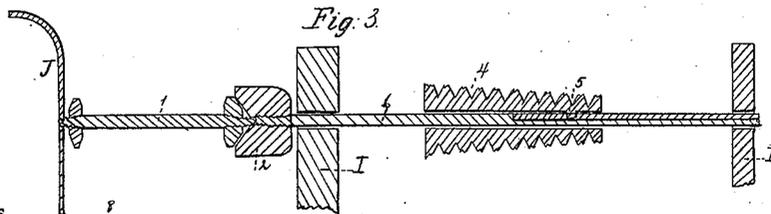
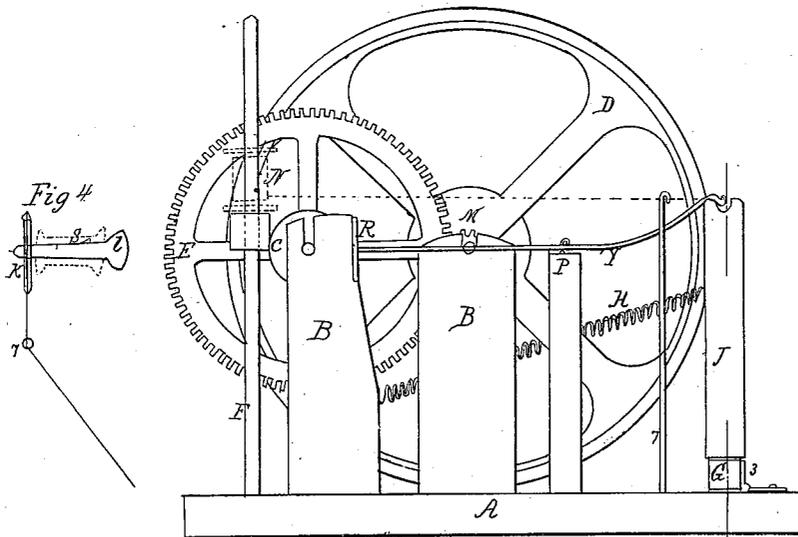


Fig. 2



Witnesses
Amstrong
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UNITED STATES PATENT OFFICE.

A. W. TODD, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MACHINES FOR WINDING SEWING-MACHINE BOBBINS.

Specification forming part of Letters Patent No. 46,955, dated March 21, 1865.

To all whom it may concern:

Be it known that I, A. W. TODD, of the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Machine for Filling Bobbins for Sewing-Machines and other Purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a top and front view. Fig. 2 is a side view. Figs. 3 and 4 are detached parts of the same, similar letters denoting like parts in all the figures.

Referring to Fig. 1, A is the pedestal. B B B B are posts, upon which the wheels D and E rest. C is the cam, having connected inclined grooves in it, as shown, and which move to and fro the horizontal rod Y, which distributes the thread from end to end of the bobbin; P, a standard, upon which the rod Y is pivoted. F is a staff for spool of thread. M is a pinion, which moves the wheel E, cam C, and rod Y. O is the crank for giving motion to all the parts. H is a spiral spring, which keeps the frame that carries the bobbin-driving shaft and graduated cone-pulley up against the driving-wheel. I I are two posts, on which the shaft 6 rests, which shaft has on it the graduated cone-pulley 4, which has twenty-one different-sized grooves to suit the different-sized threads, as occasion requires. (Seen best in Fig. 3.) The cone-pulley is allowed to slide freely upon the shaft when the frame that holds the shaft against the driving-wheel is inclined far enough from said driving-wheel to allow it thus to move. The frame, being held by the spiral spring H, is inclined away from the driving-wheel by overcoming the resistance of said spiral spring. The cone-pulley is prevented from revolving on the shaft by means of a pin, which passes through its side and into a groove in the shaft. One end of the bobbin 1 rests in the hollow cup-shaped piece 2. The other end turns in a bearing in the spring J, which presses the other end of the bobbin into the cup-shaped piece 2 with sufficient force, so that the friction produced between them will be sufficient to rotate the bobbin. This spring J is adjusted by means of a slot and thumb-screw, as seen at 8, so as to produce more or less pressure on the bobbin, and for

moving it to suit the different lengths of bobbins. The posts I I are mortised into a sill, G, which sill is fastened to pedestal A by means of a long hinge, as seen at 3 3 3, thus allowing the posts I I, which carry the bobbin-driving shaft, to be turned away from the driving-wheel so as to shift the cone. The spiral spring H, attached to the frame, keeps the cone 4 in close contact with the driving-wheel D, whereby the cone is run at different speeds, according to the groove in which the wheel is placed. Thus the head 2 is made to rotate the bobbin with different velocities to suit different-sized threads, and the thread is laid by the rod Y in an even manner upon the bobbin 1. To give tension to the thread it may be wound around the rod Y once or twice, or the spool of thread N may be weighted, so as to answer the same purpose. The rod Y is provided with a series of holes, (see Fig. 1,) so that its fulcrum on the standard P may be moved so as to give the eye of said rod Y greater or less range of motion, according to the lengths of bobbins to be filled.

R is a plate at the back end of rod Y, provided with a slot to keep the said rod in a horizontal position as it is moved back and forth by the cam C, which cam is a little concave on its face, so as to conform to the arc of the circle described by the end of rod Y, and so as to have the groove in it which operates the rod Y of uniform depth; and this rod may be run back and forth so long as there is any inclination in the grooves. Thus the rod Y, by reason of the acute angle where the grooves join each other, is made to make quick turns at the end of its journeys back and forth.

In Fig. 2 is shown a rod, 7, with an eye at the top of it to guide the thread from the spool N into a disk-bobbin, K, which is stuck on the end of a wooden shaft, l, made for the purpose. (See Fig. 4.) This shaft has a spring similar to those used on the staff of an umbrella. The spool S is slipped over this shaft and spring, and is prevented from revolving by the outward pressure of said spring, by which means thread may be wound from another spool or bobbin onto it, if desired. (The spool S is indicated by the dotted lines, Fig. 4.) The pinion M is provided with a pin, d, which enters a groove in shaft 9, so that it may be moved laterally and out of gear with the wheel E for the purpose of stopping the motion of

the rod Y while winding the spool S or the disk-bobbin K. The pinion M is kept in its place, whether turned back or forward, by making a short groove across or at right angles to the end of groove 9 next the wheel D, to receive the point *d*. The force exerted upon the pinion throws the pin out of the main groove into this short groove.

The machine is expected to be screwed down to some suitable place.

I am aware that there have been many plans for filling bobbins; but

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

The combination and arrangement of all the parts of the machine, as and for the purpose described.

A. W. TODD.

Witnesses:

JAIRUS STANFORD,
G. W. STANFORD.