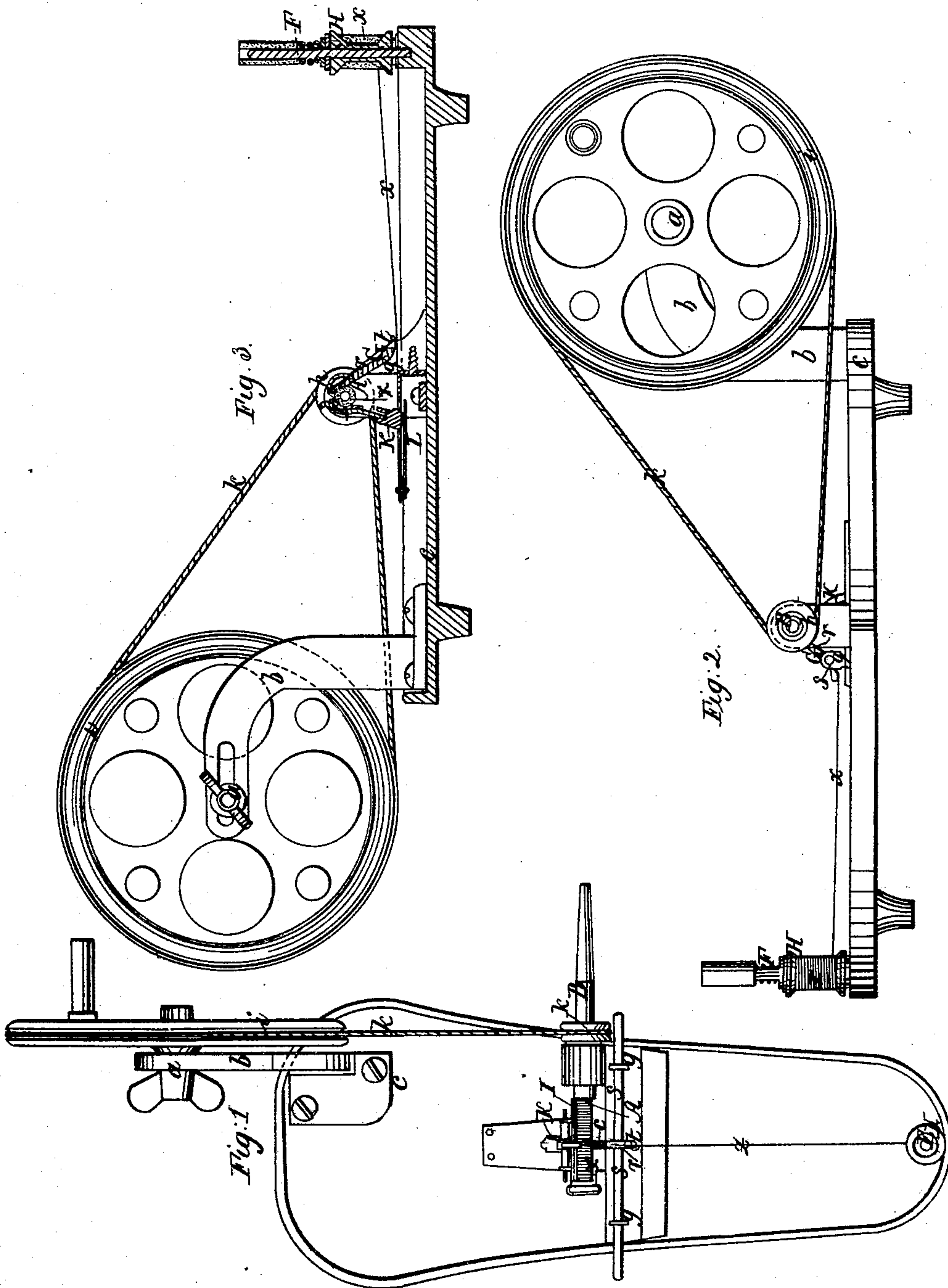


C. K. BRADFORD.

Spooling Thread.

No. 18,081.

Patented Sept. 1, 1857.



UNITED STATES PATENT OFFICE.

CHARLES K. BRADFORD, OF LYNN, MASSACHUSETTS.

MACHINE FOR SPOOLING THREAD.

Specification of Letters Patent No. 18,081, dated September 1, 1857.

To all whom it may concern:

Be it known that I, CHARLES K. BRADFORD, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Machine for Spooling Thread; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, is a top view of such machine. Fig. 2, a side elevation of it. Fig. 3, a vertical central and longitudinal section of it.

The object of my invention is to enable a person to wind thread expeditiously upon a small bobbin or spool, such for instance, as may be used in an ordinary sewing machine.

15 In the drawings, A, exhibits a sewing machine spool or bobbin so connected with or applied to a rotary shaft B, as to be capable of being put in rapid rotation with and by the said shaft when the latter is in revolution. The shaft B, carries a pulley *h*, around which and the grooved periphery of a fly wheel *i*, an endless band *k*, travels while the fly wheel *i*, is in revolution and communicates motion from the fly wheel to the pulley. The fly wheel turns on a journal or pin *a*, supported by a standard *b* erected on the base plate *c*, of the machine. From the base plate, a round post or pin F, projects upward and serves to support the reel or bobbin H, from which the thread that is to be spooled is to be drawn and unwound.

20 In passing to the winding bobbin or spool A, the thread *x*, is carried through a thread carrier G, which is composed mainly of a slide rod *r*, and an arm *s*, extending upward from such rod *r*, as shown in the drawings. The upper end or part of the rod *r*, is formed with a blunt edge to rest against the thread on the bobbin A. Besides this the rod *r*, is bifurcated at its upper end and is provided with a spring closer *e*, by which the opening of the fork may be covered so as to maintain the thread in place when in it. By the pressure of the closer on the thread, the latter will be wound on the bobbin A, with the proper degree of tension, the same varying as the pressure of the spring is varied. Besides the forked upper end, the carrier G, is furnished with a hole or guide *t* made through its foot and for the passage of the thread from the bobbin H. The thread carrier is supported in guides *g*, *g*, so as to be capable of moving or freely sliding laterally to and fro. A broad spring presser

plate I, is applied to the spool A in such manner as to extend between the two heads of the same and by the pressure of a spring to bear against the layer of thread wound or that may be in the act of being wound on the bobbin. This presser turns freely and in a horizontal direction in the upper arm of a lever K, whose other arm rests on a spring L, arranged as shown in Fig. 3.

60 Preparatory to the spooling operation being carried on the thread from the reel or bobbin from which it is to be unwound is to be passed through the guide passages of the rod *r*, of the carrier G, and led upon the bobbin A. This having been accomplished, the bobbin A, should be put in revolution so as to cause the thread to wind on it, the thread carrier at the same time being adjusted so as to rest against the side of the helix coil of thread. Such helix coil by its action or pressure against the carrier will force or slide it along laterally so as to cause thread to be drawn through the carrier and be evenly laid over the barrel or cylindrical part of the bobbin until the carrier may meet one of the heads of the bobbin on such taking place the motion of the carrier will be reversed so as to cause the thread to wind on another layer and toward the opposite head of the bobbin. This latter head, in its turn will change the direction of movement of the thread carrier or cause it to advance toward the other head. By means of the spring presser, I, each layer of thread will be closely compacted on the bobbin. It also will be smoothed or its projecting fibers smoothed or bent down so as to improve the quality as well as the appearance of the thread.

95 I am aware that in order to aid in winding and laying a rope on a drum, a traversing crane has been employed in the manner as described in the specification of the Patent Numbered 3451, dated February 28th, 1844, and granted to Stephen and James A. Bazin. I do not claim this, as my invention differs essentially therefrom, as by means of that of the brothers Bazin, the rope is simply supported and allowed to move laterally by the action of the coiled rope against that part of the rope which may extend from the bobbin to the crane. This plan or mechanism will not answer to wind small thread on a bobbin, as the coils would be likely to override one another.

100 In my spooling machine it is the pressure

of the helix coil directly against the thread carrier and also against the thread extended therefrom to the surface of the bobbin that causes the thread to wind evenly and not
5 override the coils.

I do not claim combining with mechanism for rotating a spool or bobbin, a mechanism for regulating the winding or laying of the thread on such spool or bobbin but

10 What I do claim is—

The improved mode of regulating the winding of the thread that is, by causing the

thread carrier to rest directly against and be moved and guided in its movements by the side of the helix coil on the bobbin as 15 stated.

In testimony whereof I have hereunto set my signature this 21st day of July A. D. 1857.

CHARLES K. BRADFORD.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.