(No Model.)

T. R. NICHOLS.

DEVICE FOR UNWINDING THREAD FROM SPOOLS OR BOBBINS.

No. 304,747. Patented Sept. 9, 1884.

Fig. 1

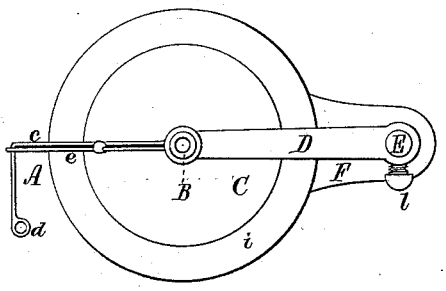


Fig. 4.

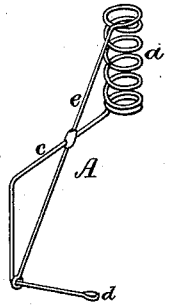


Fig. 2.

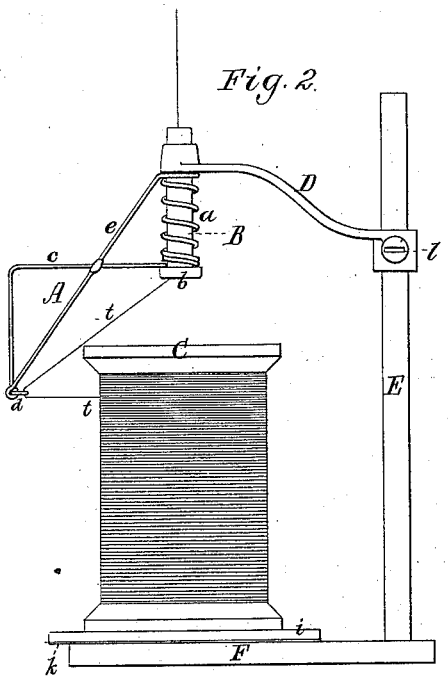
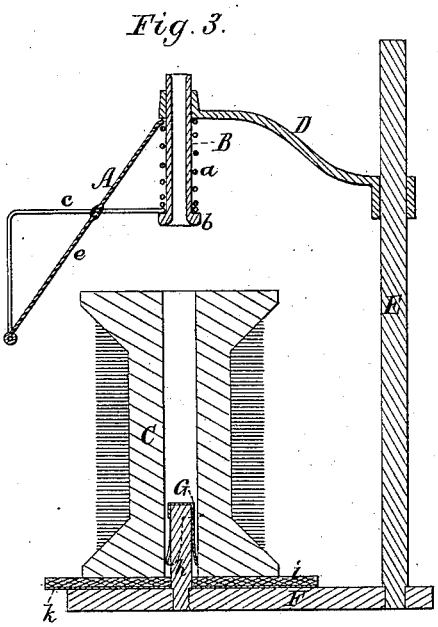


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS RAND NICHOLS, OF LYNN, MASSACHUSETTS.

DEVICE FOR UNWINDING THREAD FROM SPOOLS OR BOBBINS.

SPECIFICATION forming part of Letters Patent No. 304,747, dated September 9, 1884.

Application filed March 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS RAND NICHOLS, of Lynn, in the county of Essex, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Devices for Unwinding Thread from Spools or Bobbins; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a vertical section, of a spool with my invention applied thereto, the nature of such invention being defined in the claims hereinafter presented. Fig. 4 is a perspective view of the thread-unwinding arm, to be described.

The said thread-unwinder, as shown at A, is composed of wire bent spirally to form a tubular bearing, *a*, to encompass and revolve on a tubular journal, B, having at its lower end a flange, *b*, for the bearing *a* to rest and turn upon. From the lower spiral coil the wire projects horizontally, as shown at *c*, and is bent down vertically and next horizontally, and terminates in an eye, *d*, all as represented. From the second bend a brace or wire, *e*, extends upward obliquely to the top of the bearing *a*, and is fastened thereto and to the arm where crossing it, and also to such arm at the lower end of the brace. This brace is to prevent the arm from being sprung or bent outward by centrifugal force when the unwinding-arm is in rapid revolution, as it is liable to without the brace.

The tubular journal B is arranged above the spool C in manner as shown without being supported by or entering it, such journal being sustained in position by an arm, D, into which the journal is fixed, such arm being fixed to or adapted to slide vertically on a post, E, extending upward from the base-plate F, below the spool. The said spool or bobbin fits upon a furcated spring, G, supported by a stud, *h*, extending upward from the base-plate, the spool resting on a disk, *i*, of cloth, that in turn rests on a metallic disk, *k*, placed on the base-plate. While the thread is being unwound from the spool, such spool is at rest. There is a screw, *l*, in the arm D to clamp it to the post.

From the above it will be seen that the arm D is adjustable to different altitudes, in order to properly adapt the unwinding-arm to a spool of any usual length; also, that the tubular bearing of the unwinding-arm is supported by a device or devices independently of and wholly outside of the spool. The thread *t* from the spool after passing through the eye of the unwinding-arm goes upward through the tubular journal, and on being drawn or pulled upon will cause the unwinding-arm to revolve and the thread to unwind from the load on the spool or bobbin.

I do not herein claim for supporting an unwinding-arm a tubular journal inserted in the spool or bobbin, as shown in the United States Patents Nos. 280,504, and 270,188; nor do I claim in combination with the spool and with the unwinding-arm supported by a journal inserted in the spool a standard or post having an eye to receive the thread in its passage from the unwinding-arm, the same being as shown in the United States Patents Nos. 223,113 and 270,188, as I support the tubular journal of the unwinding-arm by a standard, or by such and an adjustable arm, as hereinbefore described, and indpendently of the spool or bobbin; and in so doing I effect an excellent improvement, one productive of new and useful results—that is to say, I can remove the spool from or apply it to its supports without disturbing the thread-unwinding arm or having to separate it from the said spool in order for a fresh spool to be substituted. I can also adjust the thread-unwinding arm to the spool, so as to cause the thread to run clear of the upper head of the said spool.

I claim—

1. The combination of the bobbin and the thread-unwinding arm with a tubular journal supporting such arm and arranged over the bobbin, and sustained by means or devices wholly outside of the bobbin and unsupported thereby.

2. The combination of the post E and its arm D, adjustable thereon, as described, with the tubular journal B, having the bearing *b*, and supported by and extending down from said arm, and with the thread-unwinding arm A, composed of the coil *a*, bent arm *c*, eye *d*, and brace *e*, and adapted to encompass and revolve on the said tubular journal and rest on its bearings, all being arranged and to operate with a spool or bobbin, essentially as represented.

THOMAS RAND NICHOLS.

Witnesses:

R. H. EDDY,

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