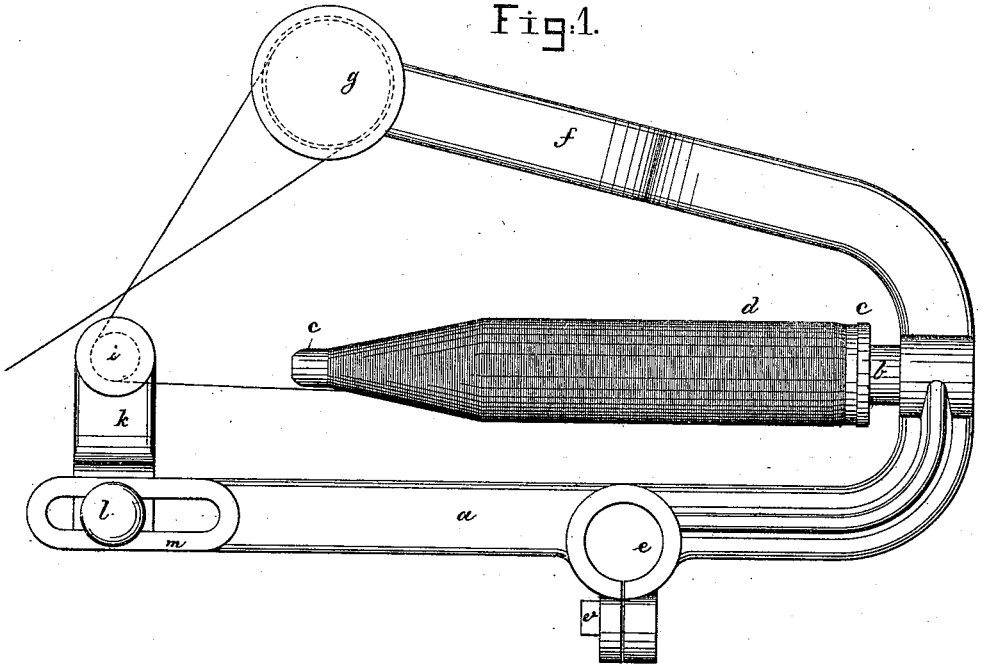
H. DOAK.

Bobbin-Holder for Spooling-Machines.

No. 199,040. Patented Jan. 8, 1878.

Fig. 1.



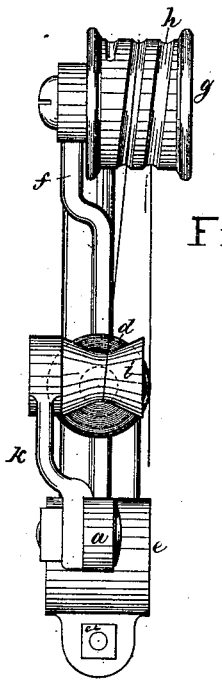


Fig. 2.

Witnesses

C. C. Perkins.

W. J. Pratt.

Inventor.

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by Crosby Gregory Attys.

UNITED STATES PATENT OFFICE.

HORACE DOAK, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN BOBBIN-HOLDERS FOR SPOOLING-MACHINES.

Specification forming part of Letters Patent No. **199,040**, dated January 8, 1878; application filed November 6, 1877.

To all whom it may concern:

Be it known that I, HORACE DOAK, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improved Bobbin-Holder, of which the following is a specification:

This invention relates to bobbin or spool holders for use in connection with spooling or warping machines, or machines wherein yarn is to be unwound from a bobbin.

The invention consists in the combination of a sustaining-frame for the bobbin, constructed as hereinafter described, and provided with an adjustable guide, arranged substantially in line with the end of the bobbin, and with a tension device.

Figure 1 represents in side elevation a bobbin-holder made in accordance with my invention, and Fig. 2 a front view thereof.

The sustaining-frame *a* has a stud, *b*, to hold the bobbin *c*, upon which the yarn *d* is wound. This frame is provided with an eye, *e*, or equivalent, and a set-screw, e^2, by which to confine the frame to a rod or support, whereby a number of frames and bobbins may be held in a row. The frame is provided with an arm, *f*, at the end of which is a tension device, *g*, made, in this instance of my invention, as a cylinder, provided with grooves *h*, in which the yarn is placed. The tension is increased or decreased in accordance with the number of times the yarn is wrapped about the tension-cylinder. Instead of this particular tension device, any other well-known tension device commonly employed for the needle-thread of a sewing-machine may be substituted.

Immediately in front of the end of the bobbin is placed a concaved surfaced guide, *i*, made either as a stud or as a roller mounted upon a stud. This guide is carried by a bracket, *k*, adjustably connected by a bolt or screw, *l*, with the slotted outer end *m* of the frame *a*. The yarn is led from the bobbin about the stud in line with the end of the bobbin, the stud being so adjusted with reference to the bobbin as to cause the yarn to be delivered from the end of the bobbin at the proper angle; thence the yarn is led about or subjected to the action of the tension device, and thence to the spool in the usual way.

This invention is especially adapted to hold bobbins containing yarn spun with "filling-wind," so called, and for which the usual holders employed in spooling-machines to hold quills or warp-bobbins wound in regular layers from end to end are not as well suited.

The holder is very compact, and admits of the arrangement of a great number of them in a small space.

When the yarn is unwound, the bobbin does not rotate, as do other warp-bobbins or quills in ordinary spooling-machines.

I claim—

1. In a bobbin-holder for a spooling-machine, the combination, with the frame to support the bobbin, of the concaved surfaced adjustable yarn-guide, having its acting-surface substantially in line with the center of the bobbin, as and for the purpose set forth.

2. The combination, with a frame to sustain the bobbin, and the guide *i*, arranged with reference to the bobbin, as described, of a grooved tension device, *g*, to control the tension upon the yarn, substantially as described.

3. The combination, with the spindle *b*, and the independent frame *a f*, provided with eye *e* and a set-screw to sustain the non-rotating bobbin, wound as a filling-bobbin, of a tension device and the yarn-guide *i*, connected with such frame, all to operate substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HORACE DOAK.

Witnesses:

JAMES C. RUSSELL,

WILLIAM H. JEWELL.