N. I. ALLEN.

Spool.

No. 163,959. Patented June 1, 1875.

Fig. 1.

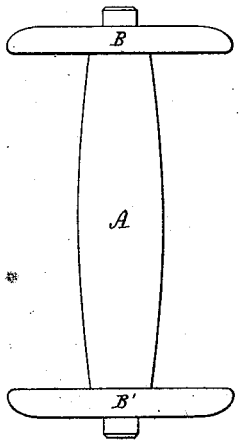
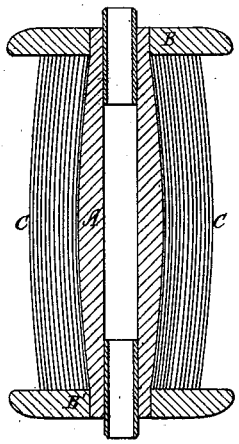


Fig. 2.



Witnesses
S. W. Piper
L. M. Müller

Nicholas I. Allen.
by his attorney.
R. H. Eddy

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UNITED STATES PATENT OFFICE.

NICHOLAS I. ALLEN, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO GEORGE DRAPER & SON, OF SAME PLACE.

IMPROVEMENT IN SPOOLS.

Specification forming part of Letters Patent No. **163,959**, dated June 1, 1875; application filed May 11, 1875.

To all whom it may concern:

Be it known that I, NICHOLAS I. ALLEN, of Hopedale, of the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Spools; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation of one of my improved spools without its "yarn-load." Fig. 2 is a vertical and longitudinal section of it with a yarn-load, such spool being what spinners term a "warper-spool."

Such spools, as usually constructed, have cylindrical bodies connecting their two heads, it being customary to make or build the yarn-loads, for reasons well known to spinners, bulging or "barrel form" instead of cylindrical, in which case the load has its greatest diameter at its middle, and is tapering therefrom to the heads, all of which requires a variable traverse, in order to effect the laying of the yarn properly on the spool.

In carrying out my invention, I make the body of the spool larger in diameter at its middle, and tapering each way from its middle to the two heads, substantially as shown in Figs. 1 and 2, in which A denotes the body, and B B′ the two heads, each being circular in section at right angles to the axis of the spool.

This construction of the spool enables the outer surface of the yarn to be formed parallel to that of the body, concentric therewith, and of even thickness in section, as shown in Fig. 2, in which the yarn-load is represented at C.

Furthermore, this improved construction of the spool allows of the yarn-load being built by an equal traverse, each layer being continued from head to head, thereby saving much expensive machinery, as required to build a barrel-shaped load on a cylindrical body.

I claim—

The double-headed spool, having its body largest in diameter at its middle, and tapering each way from its middle to the two heads, all being substantially as shown and described.

NICHOLAS I. ALLEN.

Witnesses:

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W. S. BANCROFT.