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N. Rider.

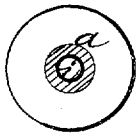
Bobbin.

Patented Dec. 31, 1833.

Fig. 1.



Fig. 2.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

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Nathaniel Rider Millbury Mass.

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Nathaniel Rider himself of his improvement in the construction of the common Cotton Spool or Bobbin

To all to whom these presents shall come Be it known that I Nathaniel Rider of Millbury in the County of Worcester and Commonwealth of Massachusetts Manufacturer have invented a new and useful improvement in the construction of the common Cotton Spool and Bobbin and that the following is a full and exact description of the construction and operation of the same as invented & improved by me and described in the words following to wit

The objection to the Spool or Bobbin as now used consists in the fact that the friction between the boxes of the bobbin and the spindle on which it turns is so great that the bobbin adhering to the spindle revolves with it. The result of this difficulty is that the bobbin sometimes gets too fast and at others too slow and beside drawing the work often breaks the thread. All these difficulties are removed by the introduction of my bobbin which is constructed after this manner. Instead of making the boxes of the bobbin of wood as heretofore I make them of metal. These metallic boxes are fitted so deep or thick as those made of wood in the common way. In consequence of this arrangement the bearing on the spindle is greatly diminished and the removal of the friction between the boxes and the spindle the bobbin is free either to follow the spindle with a motion more easy and uniform and at the same greatly accelerated. Thus by the application of these metallic boxes the friction between the boxes of the bobbin and spindle is diminished in two ways. The bearing on the spindle is about one fourth

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as much as it is in the machine formed in the usual way and the substance of the bar being smaller is a great deal weaker. It would be much less even if the bearing were the same in diameter for this friction under the bobbin may be diminished by placing a small cloth washer and gives the yarn a much lighter & easier draught — By the introduction of these metallic bars the friction of the Boxes and Spindle is so far removed that by the increased celerity of the bobbin together with a more regular and uniform motion, almost double the quantity of yarn may be produced.
The operation of the machine is the same as that now in use and the bobbin is of similar shape. And all I claim as my improvement is the introduction of metallic bars into the bobbin used in spinning cotton warp yarn or twisting cotton thread

Test. Witnesses
Wm Rider
Christopher Columbus Baldwin

Nathaniel Rider

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