

J. ROPER.

Improvement in Spindles and Bobbins for Spinning Machines

No. 132,986.

Patented Nov. 12, 1872.

Fig. 1.

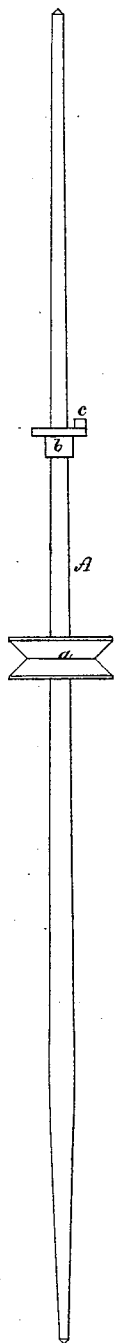


Fig. 2.

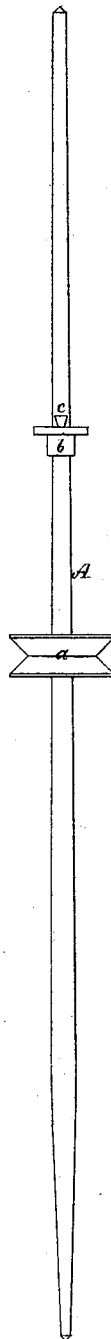


Fig. 4.

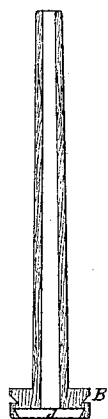
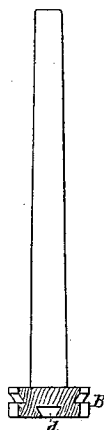


Fig. 3.



Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES ROPER, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN SPINDLES AND BOBBINS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. 132,986, dated November 12, 1872.

To all whom it may concern:

Be it known that I, JAMES ROPER, of Lawrence, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in the Spindles and Bobbins of Spinning-Machines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figures 1 and 2 are side elevations of a spindle, and Fig. 3 is a bottom view; Fig. 4, a longitudinal section, and Fig. 5 a transverse section, of a bobbin provided with my invention.

In such drawing, A denotes the spindle, furnished with the usual whirl *a* and bobbin-rest *b*. In carrying out my invention, I provide the said bobbin-rest with a dovetailed projection or stud, *c*, to extend up from it and to be otherwise arranged with it, in manner as shown. Furthermore, I construct the base of the bobbin B with a dovetailed recess or slot, *d*, to receive such dovetailed stud, such recess or slot being in one side only or on opposite sides of the bore of the bobbin, as shown. The recess in its narrowest part should be as wide as or a little wider than the larger base of the projection in order that the said projection may readily enter the recess when the bobbin is being placed on the spindle and its rest *b*. It has been common to provide the bobbin-rest with a straight stud having its side at a right angle to the upper surface of the bobbin-rest, the bobbin having a corresponding recess to receive the stud, all of which will not operate, as does a dovetailed stud and recess, to prevent the bobbin rising off its seat or rest while the spindle may be in rapid revolution. The inclined side of the dovetailed stud by resting against the inclined side of the slot or recess operates with such not only to drive the bobbin around with the spindle while the latter is revolving, but to prevent the bobbin from rising thereon or off its seat, and this whichever may be the direction of revolution of the spindle.

It is obvious that were the projection or stud made "T-shaped" or double hooked, and the recess be correspondingly formed in transverse sections, such would be, in some respects, equiv-

alent to the dovetail form; but the latter is better, as it is not liable to interfere with the doffing operation or removal of the bobbin from its seat, and requires no turning of the bobbin by the operative in order to disengage it from the projection, he having only to pull the bobbin upward, the inclined surfaces in contact operating to effect the necessary turning of the bobbin to admit of disengagement of it from the seat.

I make no claim to a spindle and bobbin provided with a straight stud and a corresponding recess, as heretofore made. Nor do I claim devices, as shown in Fig. 9 of the English patent of Tatham, No. 2,118, for 1854; as, were the stud and notch made and inclined, as shown in such figure, the bobbin, on the stoppage of the spindle, would be thrown up out of engagement with the spindle, and the spindle could not be revolved backward without effecting such a result. With the dovetailed or T-shaped projection and corresponding recess the spindle may be revolved in either direction without the bobbin being thrown up or getting out of engagement. Nor will such derangement take place or be caused by momentum of the bobbin when the spindle is suddenly stopped.

What I claim as my invention is—

1. A spinning-machine spindle provided with a dovetailed or equivalently-shaped stud erected on its bobbin rest or supporter, and for use with a corresponding recess made in the base of the bobbin.

2. A spinning-machine bobbin provided with the dovetailed or equivalently-shaped recess or socket, to receive a dovetailed or equivalently-shaped stud to project from the bobbin-rest of a spindle, as described.

3. The combination of a spinning-machine spindle and bobbin, the former provided with a dovetailed or equivalently-shaped stud and the latter with a correspondingly-shaped recess, as described.

JAMES ROPER.

Witnesses:

R. H. EDDY,
S. N. PIPER.