

(No Model.)

A. ANDERTON.

SPINDLE FOR SPINNING AND TWISTING MACHINES.

No. 537,518.

Patented Apr. 16, 1895.

Fig. 1.

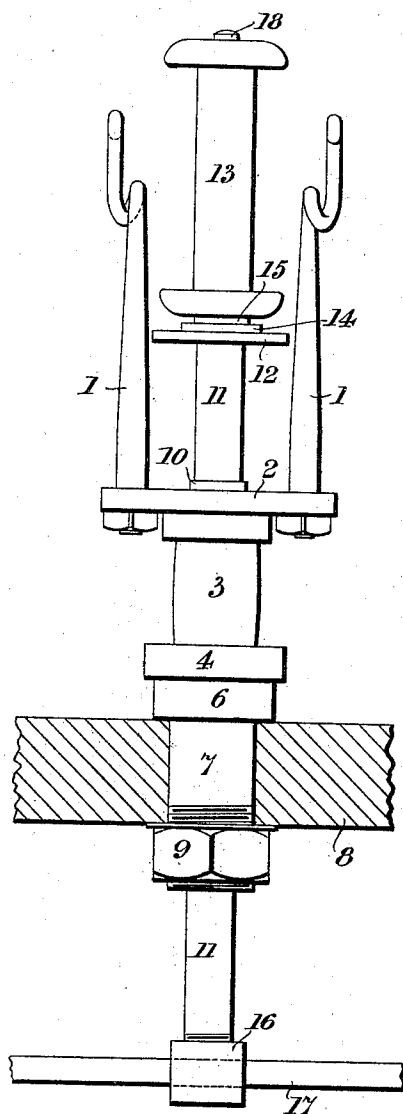


Fig. 2.

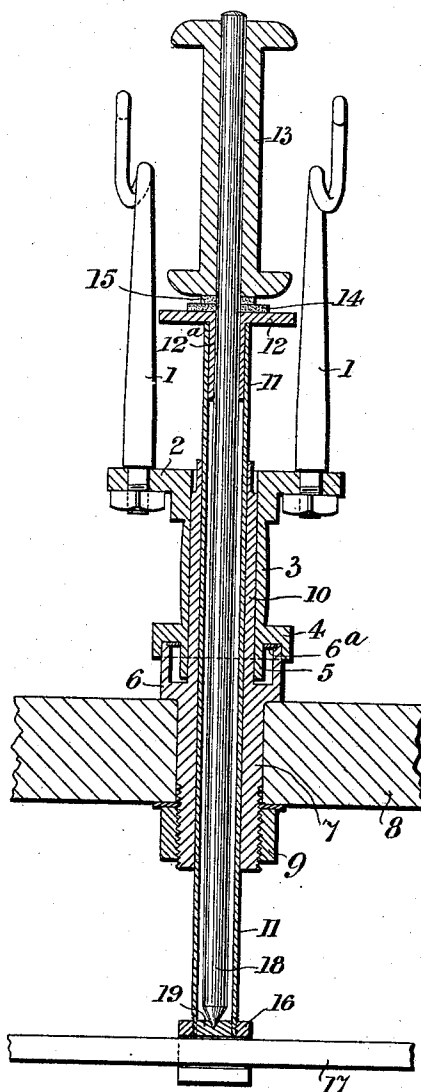
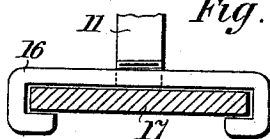


Fig. 3.



WITNESSES.

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ARTHUR ANDERTON, OF CLECKHEATON, ENGLAND.

SPINDLE FOR SPINNING AND TWISTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 537,518, dated April 16, 1895.

Application filed August 29, 1894. Serial No. 521,612. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR ANDERTON, a subject of Her Majesty the Queen of Great Britain, residing at Cleckheaton, in the county of York, England, have invented a certain new and useful Improvement in Spindles for Spinning and Twisting Machines, of which the following is a specification.

My invention relates to an improvement in spindles for spinning and twisting machinery the object being to provide a flier spindle which may be operated at a greater speed than the Rabbeth or the ordinary flier spindles at present employed.

To this end briefly stated the invention consists in employing an upright flier surrounding but not in contact with a sleeve carrying a dead plate which in turn surrounds a loose spindle the dead plate which supports the bobbin on the loose spindle being fixed as far as rotation is concerned but being capable of having a rising and falling movement to give the necessary traverse to the fiber being wound upon the bobbin and means for supporting and lubricating the wharve.

A spindle constructed according to my invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of same showing a portion of the top rail and lifter rail. Fig. 2 is a sectional elevation of same, and Fig. 3 is a cross section of the lifter rail showing the manner of holding the spindle tube thereto.

The upright flier consists of arms 1. 1. secured to a plate 2 forming part of a whirl 3. This whirl has a flanged collar 4 and an extension 5 which dips into an oil cup 6 the cup having a bolster 7 which passes through the top rail 8 of the machine. The bolster is screwed to receive a nut 9 by means of which the oil cup is firmly secured to the rail. The top edge of the cup 6 is recessed to receive a cover or washer 6^a for the purpose of retaining the oil in the cup and as a further precaution the flange on collar 4, projects down over the outer edge of oil cup 6. The bolster 7 has also an extension or sleeve 10 which forms a long fixed bearing for the whirl 3 which is thus prevented from undue vibration.

Through the parts 7 and 10 passes a fixed sleeve 11 the upper end of which carries a dead plate 12 having a bushing 12^a suitably secured in same, upon which dead plate rests the bobbin 13 one or more cloth, felt or like washers such as 14. 15 being interposed between the dead plate and the bobbin.

The lower end of the sleeve is screwed or otherwise secured to a footing 16 which is formed to partly embrace the lifter rail 17 as shown in Fig. 3. A certain amount of play on the rail is allowed to the footing in order that the sleeve 11 may not be quite rigid with the lifter rail which might cause it to bind slightly when rising and falling in the parts 7, 10.

The sleeve 11 incloses a loose spindle 18 which is supported by the bushing 12^a and is stepped in a block 19 closing the lower end of the sleeve 11 which is filled with oil to lubricate the spindle.

In the drawings the lifter rail 17 is shown as having raised the bobbin 13 about half the height of the flier arms 1.

It will be understood that while the whirl 3 and flier arms are rotated the sleeve 11 and dead plate 12 on which the washers are placed for the bobbin to rest are being raised and lowered by the lifter rail to give the necessary traverse to the thread on the bobbin such sleeve and its dead plate 12 having no rotation and this together with the motion of the loose spindle imparts the necessary drag to the bobbin.

Variations may be made over the method of constructing the spindle shown in the drawings but the construction shown is the one preferred.

I am aware that various attempts have been made to construct an effective bobbin spindle having an upright flier but heretofore so far as I am aware none of such have come into general use by reason of the absence of means for imparting successfully the requisite drag to the bobbin which is attained by the combination of my dead plate a sleeve fixed against rotation and loose spindle.

What I claim, and desire to secure by Letters Patent, is—

In combination, a loose spindle, a surround-

ing sleeve fixed against rotation, the lifter
rail, a loose footing for securing the sleeve
thereto, a dead plate carried by the sleeve, a
bushing surrounding said sleeve, a top rail to
5 which said bushing is attached forming a
fixed bearing surface for the moving sleeve,
an upright flier, a wheel attached to same, an
oil cup and sleeve for lubricating and for sup-
porting the wheel, and means for securing

the oil cup to said top rail, substantially as is
described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

ARTHUR ANDERTON.

Witnesses:

EDWARD DAVIE MACHÚE,
FRANK HEWORTH.