

PATENTED JULY 23, 1907.

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*Integrate & Synchronize*



# UNITED STATES PATENT OFFICE.

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## SPINNING-SPINDLE.

No. 860,678.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed January 30, 1907. Serial No. 354,848.

*To all whom it may concern:*

Be it known that I, DAVID LEMOINE, a citizen of the United States, residing at Fisherville, in the county of Worcester and State of Massachusetts, have  
5 invented a new and useful Spinning-Spindle, of which the following is a specification.

The object of this invention is to improve the construction shown in an application for patent filed by me December 22, 1904, Serial No. 237,876.

10 The invention particularly relates to improving the bearing or spiral bolster used in connection with said spindle.

The invention is shown in the accompanying drawing, referring to which,

15 Figure 1 is a sectional elevation of the improved construction. Fig. 2 is an elevation of the spiral bolster removed from the spindle, said elevation being taken from the other side relatively to Fig. 1. Fig. 3  
20 is a sectional view taken on the line 3—3 of Fig. 2, and Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1.

Referring to the drawing and in detail, A designates the base or casing, cut inside of which are grooves 10—  
10 which extend nearly to the bottom.

25 B designates the step which is made in the form of a bushing to receive the end of the spindle and which step is provided with wings or projections 13—13 to engage the grooves 10—10 in the base so that the step will be held from turning.

30 The bolster in the structure shown in my previous application for patent was made in the form of a flat strip twisted into a left-hand spiral to engage the spindle, which bolster was so arranged that the revolution of the spindle would act to lift the oil up and  
35 lubricate the spindle its entire length. In some instances, when it is attempted to get the full advantage of my invention by running the spindle at a very high speed or by increasing the speed of the spindle, it has been found that oil will work up too rapidly  
40 and will flow up over the end of the casing.

The object of the present improvement is to construct the bolster so that there will be no overflow of oil at high speeds. To this end, the bolster in the present instance is made in the form of a bearing  
45 member 14 which constitutes a journal or cylinder and extending down from this journal or cylinder is a flat spiral 15 formed integrally with the bearing 14. This bolster can be accurately made by taking a cylinder or tube and by cutting a groove therein to form  
50 the spiral 15. The lower end of the spiral is bent outwardly, as shown at 16, to form a projection. A pin 160 is driven into the bearing 14 and left projecting slightly therefrom. The projection 16 and the pin 160 engage grooves 17 cut part way down the cas-

ing, which projection and pin thus hold the bolster in 55 place and prevent the same from turning.

A groove 18 is formed down the outside of the bearing portion 14 of the bolster, which groove connects at its upper end with a hole 19 bored through the side of the bolster. A similar groove 20 is formed at the 60 end of the flat spiral and communicates with a hole 21 bored through the bearing portion of the spindle, holes 19 and 21 coming opposite each other, as shown in Fig. 3. By this arrangement, as the oil is lifted up the spiral, the surplus will run up the grooves 18 65 and 19 and will thus lubricate the bearing portion 14 of the bolster. The bearing portion 14 of the bolster will also prevent any overflow of oil from great speed imparted to the spindle, the portion of the bearing above holes 19 and 21 being proportioned to check 70 the upward flow of oil and still let enough up to keep the entire bearing lubricated. By this arrangement, the spindle bearing will be kept lubricated for its entire length, so long as the level of the oil does not get below the end of the bolster. I have 75 also found it to be advantageous to use the cylindrical bearing portion at the upper end of the bolster, as by this arrangement, the spindle will be provided with a solid bearing at the point practically where the pull of the driving belt is taken. 80

The details and arrangements herein shown and described, may be greatly varied by a skilled mechanic without departing from the scope of my invention as expressed in the claims.

Having thus fully described my invention, what I 85 claim and desire to secure by Letters-Patent is:—

1. A bolster for a spinning spindle, comprising a bearing portion constituting a complete cylinder, and a spiral bearing portion connected therewith.

2. A bolster for a spinning spindle made in the form of 90 a bearing at the top constituting a complete cylinder, and an integral spiral bearing depending therefrom.

3. A bolster for a spinning spindle, comprising a cylindrical bearing and a depending spiral bearing, and a groove extending up from the spiral and communicating with the 95 inside of the cylindrical bearing.

4. A bolster for a spinning spindle, comprising a cylindrical bearing and a depending spiral bearing, grooves extending up from the spiral on the outside of the cylindrical bearing and terminating in holes communicating 100 with the inside of the cylindrical bearing.

5. A bolster for a spinning spindle, comprising a cylindrical bearing, and a spiral bearing, the cylindrical bearing having a groove extending from the spiral and communicating with the inside of the cylindrical bearing to 105 conduct a lubricant thereto.

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

DAVID LEMOINE.

Witnesses:

LOUIS W. SOUTHGATE,  
E. M. ALLEN.