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SPINDLE SUPPORT FOR SPINNING, TWISTING, AND THE LIKE MACHINES.

APPLICATION FILED DEC. 27, 1910.

988,130. Patented Mar. 28, 1911.

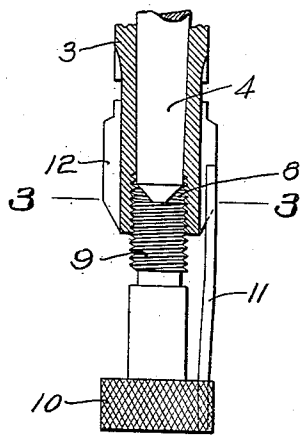

Fig. 2.

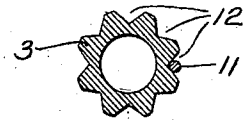

Fig. 3.

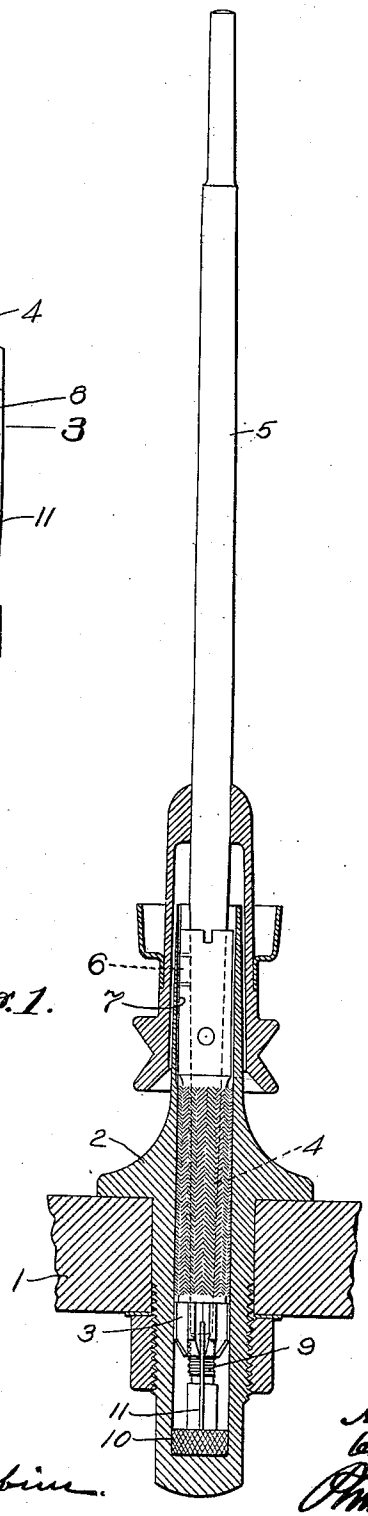

Fig. 1.

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UNITED STATES PATENT OFFICE.

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SPINDLE-SUPPORT FOR SPINNING, TWISTING, AND THE LIKE MACHINES.

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Application filed December 27, 1910. Serial No. 599,516.

To all whom it may concern:

Be it known that I, ALBERT H. MORTON, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Spindle-Supports for Spinning, Twisting, and the Like Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in spindle-supports for spinning, twisting and the like machines, that is, to spindle-supports of the class comprising a bolster-case, a bolster having a tapered interior to receive the tapered pintle of the spindle, and a step for the pintle, with the bolster and step in screw-threaded connection with each other for their relative adjustment and for the relative adjustment of the pintle and bolster.

Heretofore, it has been proposed to secure the step in adjusted relation to the bolster by attaching to the step a spring finger with its free end projecting upward and adapted to enter one of a series of grooves or depressions on the exterior of the bolster. It was proposed that the end of the spring finger should be bent outwardly to facilitate taking hold of it to lift it out of the grooves in the exterior of the bolster so that the step could be turned with relation to the bolster to effect a longitudinal adjustment of the step with respect to the bolster. In this construction, however, the walls of the grooves in the exterior of the bolster were radial, and it was necessary, in order to adjust the step with relation to the bolster, to lift the spring finger out of the groove or depression in the exterior of the bolster before the step could be turned. This was awkward and inconvenient, and, so far as the applicant is aware, the spindle was never much, if any, commercially used.

The object of the present invention is to improve the construction of such spindle-support so as to facilitate the adjustment of the step in the bolster.

To this end the invention consists in the improved spindle-support hereinafter described and particularly defined in the claim.

In the accompanying drawings illustrating the preferred form of the invention, Figure 1 is a vertical section of a spindle and its supporting means embodying the invention in its preferred form. Fig. 2 is an enlarged sectional elevation showing the lower end of the bolster in vertical section, and Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2.

In the drawings the spindle rail 1 carries the bolster-case 2 in which the bolster 3 is supported and which, in turn, is the bearing for the pintle 4 of the spindle 5. The bolster 3 is held from rotation in the bolster-case by a pin 6 which projects therefrom into a groove 7 in the interior of the bolster-case. The lower end of the bolster is screw-threaded at 8 to receive the screw-threaded end 9 of the step. The head 10 of the step is knurled to enable the hand readily and securely to grasp the step for turning it in the lower end of the bolster. The bolster-case, bolster, spindle and step are, or may be, except as hereinafter described, all as is common in this type of spindle-support.

The step is secured in adjusted position in the bolster by means of a spring pin 11 which is driven into a hole in the head 10 of the step. The lower end of the bolster is provided with a plurality of longitudinally disposed V-shaped notches or grooves 12 which are adapted to receive the free end of the spring pin 11. These notches are preferably of such depth that the outer surface of the spring pin will be at or below the surface of the cylinder in which the notches are cut. When the bolster is inserted in the bolster-case, with the spring pin 11 occupying one of the notches, the bolster-case will closely embrace the bolster and the pin will be prevented from slipping from one notch or groove to another. The grooves or notches 12 in the lower end of the bolster have been referred to as V-shaped, but the invention contemplates any form of notch or groove whereof the sides are inclined with respect to the outer surface of the bolster-case, so that by turning the step the pin will be caused to ride up the inclined side of the notch and slide along the surface of the bolster from one notch to another. This is the important feature of the invention, as it affords provison for adjusting the step with relation to the bolster without any other manipulation than to grasp the knurled head of the step with one hand and the bolster with the other and to turn the one on the other, the pin sliding

from groove to groove as the step is turned, and holding the step in adjusted position when the proper relative adjustment is reached.

While the form of the invention illustrated in the drawings and described in the foregoing description constitutes the preferred form of the invention, because of its simplicity and efficiency, it is to be understood that the invention may be embodied in other forms within the scope of the following claim:—

A spindle-support for spinning and the like machines having, in combination, a bolster-case, and a bolster and step having screw-threaded connection for relative adjustment, provided with a spring pin secured to one of such members, the other member being provided with a plurality of pin-receiving spaces having inclined sides for receiving the free end of the spring pin, thus permitting rotation of the bolster and step with relation to each other under adjusting strains, and holding them against relative movement under running strains, substantially as described.

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