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R. G. CARLE.
TENSION DEVICE FOR SPINNING FRAMES.
APPLICATION FILED MAY 23, 1905.

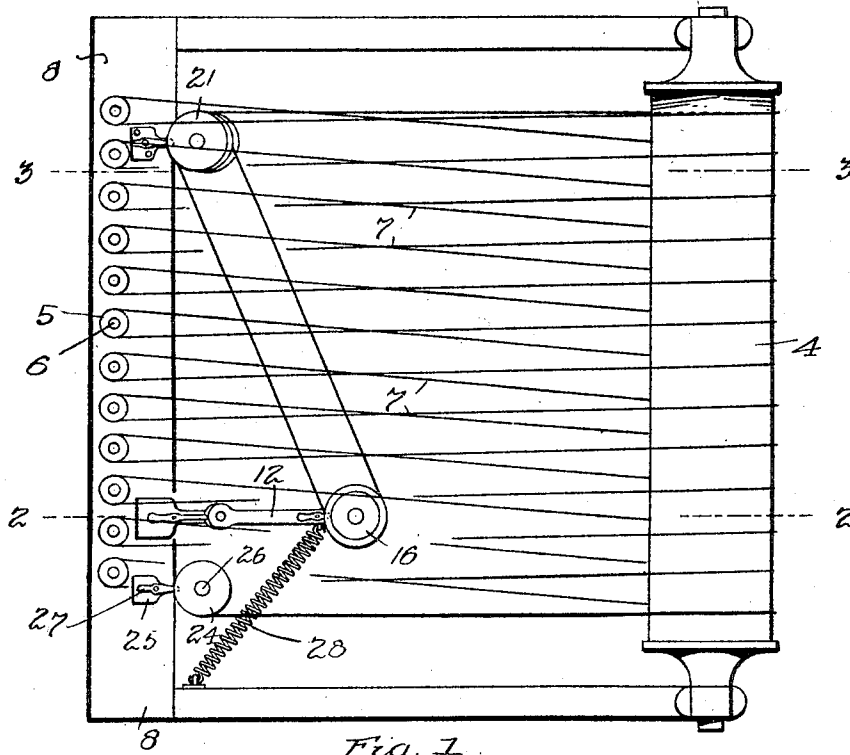


Fig. 1.

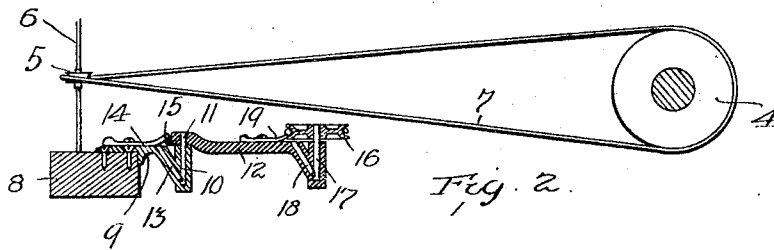


Fig. 2.

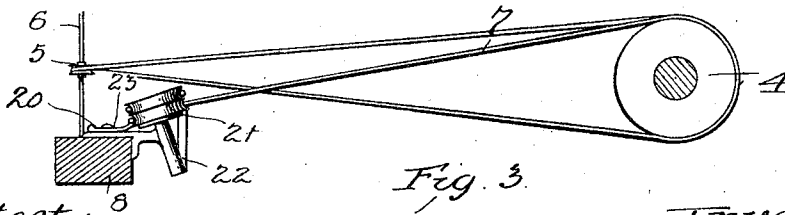


Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT G. CARLE, OF BLACKSTONE, MASSACHUSETTS.

TENSION DEVICE FOR SPINNING-FRAMES.

No. 812,919.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed May 23, 1905. Serial No. 261,861.

To all whom it may concern:

Be it known that I, ROBERT G. CARLE, a citizen of the United States, residing at No. 16 Main street, Blackstone, Massachusetts, have invented certain new and useful Improvements in Tension Devices for Spinning-Frames, of which the following is a specification.

My said invention relates to improvements in devices for taking up slack of the spindle-driving bands of spinning-mules.

The object of the invention is to provide an extremely simple, economical, and efficient device; and with these and other objects in view the invention includes the features of construction and arrangement and combination of parts hereinafter described, and more particularly pointed out in the claims.

I have illustrated the invention in the accompanying drawings, in which—

Figure 1 represents a plan view of a single portion of the mule to illustrate the invention. Fig. 2 is a section on line 2 2 of Fig. 1, and Fig. 3 is a section on line 3 3 of Fig. 1.

Referring by reference characters to these figures, the ordinal 4 represents the drum or driving-cylinder, and 5 the pulleys mounted on the spindles 6.

7 designates a driving-band passing around the drum 4 and the pulleys 5 and by which motion is imparted to the spindles in the ordinary and well-known manner.

Upon the frame-bar 8 I mount a bracket 9, having in its outer portion a socket 10 to receive the hinge-pin 11 of a swinging arm 12. An inclined oil-duct 13 leads to the recess 10 for supplying lubricating-oil to the hinge-pin, and a pivoted plate 14 serves to cover this oil-duct and also by engaging a flange 15 on the base of the arm 12 serves to hold the arm in position. The arm carries at its outer end a pulley 16, over which the driving-band passes in the manner herein described. This pulley has its supporting-shaft 17 journaled in an opening or recess in the end of the arm 12, and an inclined oil-duct 18, leading to this, serves to supply lubricant thereto. A cap 19, pivotally connected to the arm, engages the flange of the pulley and serves to hold it, with its axle-pin 17, against accidental displacement. A bracket 20 is also pivotally secured to the bar 8, and in an inclined recess formed in the end of this arm is journaled the axle-pins of a double pulley 21.

An inclined duct 22 serves to supply lubricant to this axle-pin, and a retaining-plate 23, engaging the flange of the pulley, prevents accidental displacement thereof. The band 7 after leaving the drum 4 at the left-hand end of Fig. 3 passes around one of the pulley-sections 21 and thence to the pulley 16, from which point it passes back to the other pulley-section 21, and thence along to a pulley 24, connected to the frame-bar 8. I prefer to make this connection by a bracket 25, having an extension in which the hinge-pin 26 of the pulley projects, the pulley being held against displacement by a plate 27, engaging the flange in substantially the same manner as the other pulleys referred to. From the pulley 24 the band passes to the drum 4 and thence back and forth between the drum and spindles, as already described and as well understood by those skilled in the art. A spring 28 extends between the arm 12 and a portion of the frame and tends to swing said arm toward the right. This movement of the arm will carry the pulley 16 away from the pulley 21 and tend to take up the slack in the driving-band.

Having thus described my invention, what I claim is—

1. In a spindle-driving device, the combination with a driving-drum, spindles, a driving-band, of a double pulley carried by the frame, a pivoted arm carrying a single pulley, the driving-band passing once around said single pulley and twice over the double pulley, and a spring exerting tension on the pivoted arm, substantially as described.

2. The combination with the frame and the drum, spindles journaled therein, of a double pulley suitably carried by the frame at one end, a single pulley carried by the frame at the other end, an arm pivotally connected to the frame and carrying a single pulley at its outer end, a driving-band passing around the drum and spindles, and also passing twice around the double pulley and once around the single pulley and having a looped portion extending from the double pulley to the pulley on the pivoted arm, and a spring exerting tension on said pivoted arm, substantially as described.

3. In a device of the character described, the combination with the spindle-driving band, of a bracket having a recess, an arm having a hinge-pin projecting into said recess, an oil-duct in said bracket leading to said re-

cess, and a retaining device covering said oil-duct and engaging the flange on the end of the arm, substantially as described.

4. In a device of the class described, the
5 combination with the driving-band, of a supporting-bracket having a recess therein, an idle pulley having an axle-pin journaled in said recess and a retaining-plate engaging the

flange of the pulley for holding the pin in the recess, substantially as described. 10

In testimony whereof I affix my signature
in presence of two witnesses.

ROBERT G. CARLE.

Witnesses:

JEFFERSON ALDRICH,
VERA S. COOK.