

(No Model.)

J. P. THOMPSON.

TENSION REGULATING DEVICE FOR LOOM SHUTTLES.

No. 464,444.

Patented Dec. 1, 1891.

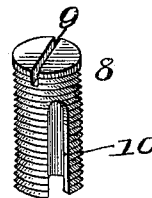
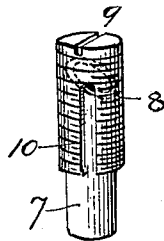
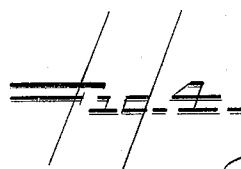
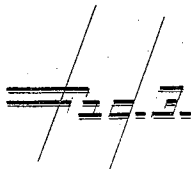
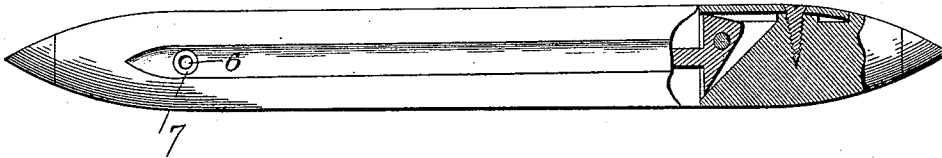
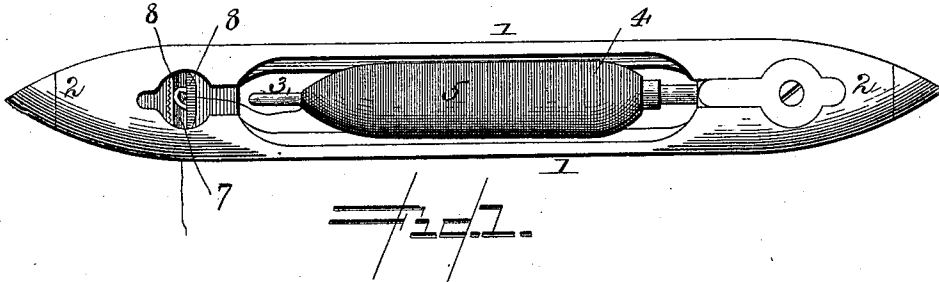


Fig. 5.

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UNITED STATES PATENT OFFICE.

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TENSION-REGULATING DEVICE FOR LOOM-SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 464,444, dated December 1, 1891.

Application filed June 12, 1891. Serial No. 396,029. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. THOMPSON, a citizen of the United States, and a resident of Olneyville, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Tension-Regulating Devices for Loom-Shuttles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same; reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to means for regulating the drag or tension of the thread in loom-shuttles, and is designed as an improvement upon the invention described and claimed in Letters Patent granted to me August 28, 1883, No. 284,089. In this said patented invention the thread from the bobbin passed to and through a rotatable eye-piece extending laterally through the shuttle, by turning which eye-piece the tension of the thread is regulated. While this construction performs its function in an efficient manner, still it is objectionable in some respects, owing principally to the tendency of the thread or yarn to crowd between the side of the eye in the eye-piece and the shuttle, due to the twist of the yarn.

My invention is designed to obviate this and other defects and provide improved means for regulating the tension of the yarn or thread which shall possess superior advantages with respect to efficiency and economy in operation.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a loom-shuttle with my improvements applied thereto. Fig. 2 is a side elevation of the same partly broken away. Fig. 3 is a view of the beveled eye-piece. Fig. 4 is a view of the rotatable sleeve, and Fig. 5 is a detailed perspective view of the eye-piece and rotatable sleeve in their relative position.

In the said drawings, the reference-numeral 1 designates the sides, and 2 the ends, of an ordinary loom-shuttle, having the spindle 3 attached in any suitable manner, upon which is placed the bobbin 4. All these parts may be of any known construction and form no

part of my present invention. The bobbin is wound with "filling" or "woof" 5, which is carried thence through an eye near the end of the shuttle-body and caused to emerge at 6. In passing through this eye the proper drag or tension is given to the thread through the following instrumentalities.

The numeral 7 denotes an eye-piece consisting of a tube of bone, metal, or other suitable material passing through an aperture in the shuttle, extending to about the center thereof, and having its inner end beveled, as shown more clearly in Fig. 3.

The numeral 8 designates a hollow metallic or other sleeve closed at its outer end and provided with a nick 9 to receive a screw-driver by which it may be rotated. This sleeve is screw-threaded externally and provided with a slot 10, extending from its inner end to near the opposite closed end thereof, and embraces the inner end of the eye-piece 7.

The object of making the sleeve 8 screw-threaded is to prevent it from accidentally falling out. The bevel of the eye-piece with respect to said screw-threads must be such that the open area included by the sides and top of the slot 10 and said beveled end gradually increases or decreases in size according as the sleeve is turned one way or the other.

In practice the thread or yarn from the bobbin passes through the slot in the sleeve to and through the hollow eye-piece, emerging therefrom at 6. When the sleeve is turned so that the slot 10 is uppermost, there will be little or no tension upon the thread while passing through the eye-piece. When, however, the sleeve is turned by means of a screw-driver inserted in the neck or notch in the outer end thereof, the orifice formed by the slot 10 of the sleeve and the beveled end of the eye-piece 7 will be decreased in size, so as to bind the thread in its passage therethrough, thereby increasing the drag or extension.

Having thus described my invention, what I claim is—

1. The combination, in a loom-shuttle tension device, of a beveled eye-piece and a sleeve having a slot in its body, said sleeve embracing said eye-piece and adapted to be moved thereon, whereby the opening formed between the wall of the slot and end of the eye-piece may be increased or decreased to con-

trol the tension of the thread passing through said opening.

2. In a loom-shuttle tension device, the combination of the hollow eye-piece having a beveled end and a rotatable sleeve having a slot for the passage of the thread or yarn encircling said eye-piece, substantially as described.

3. In a loom-shuttle tension device, the combination, with the hollow eye-piece having a beveled inner end, of the rotatable sleeve encircling said eye-piece, closed at one end, and

formed with a nick or notch, and having a slot for the passage of the bobbin, thread, or yarn, and screw-threaded externally, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN P. THOMPSON.

Witnesses:

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