T. CHEETHAM.

Shuttle for Looms.

No. 164,144. Patented June 8, 1875.

Fig. 1.

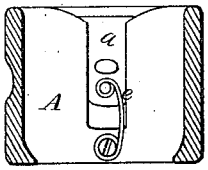


Fig. 2.

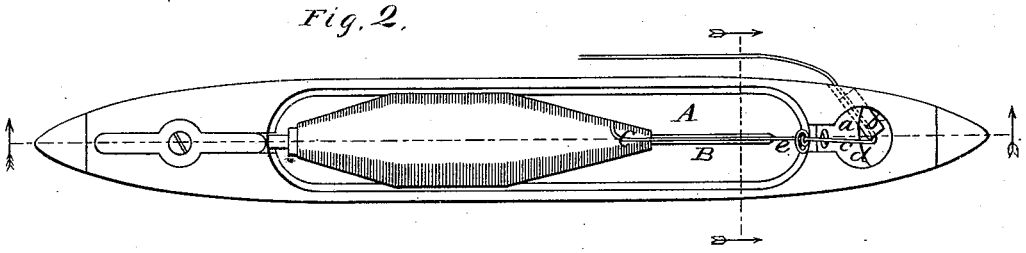
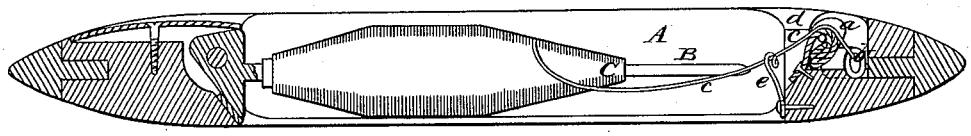


Fig. 3.



WITNESSES

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THOMAS CHEETHAM, OF LEWISTON, MAINE.

IMPROVEMENT IN SHUTTLES FOR LOOMS.

Specification forming part of Letters Patent No. **164,144**, dated June 8, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, THOMAS CHEETHAM, of Lewiston, in the county of Androscoggin and State of Maine, have invented a new and valuable Improvement in Self-Threading Shuttle Friction-Guides; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse section of my device, and Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view of the same.

This invention has relation to shuttles; and it consists in the construction and arrangement of a thread-guide and friction device adapted and designed to regulate the tension of the shuttle-thread, and at the same time to prevent accidental looping and consequent breaking of the unwinding thread, as hereinafter fully shown and described.

In the accompanying drawings, the letter A designates a loom-shuttle; B, the spindle thereof; and C, the cop of thread. At the delivery end of the shuttle, beyond the spindle-slot, is formed a recess or seat for the reception of the friction-pad *a*, of cloth or other other suitable material. The oblique discharging or delivery eye *b* leads into this recess beyond the friction-pad *a*, which is preferably rolled or packed in convex form, as shown, to expose a considerable surface of contact to the passing thread *c*. The friction-recess *d* communicates with the spindle-slot by an open passage for the thread from the cop. Between the delivery end of the spindle and the friction-pad *a* is arranged the thread-guide *e*. This is usually formed of wire secured to the shuttle-body by a loop and pin at one end, and at the other end bent spirally in the form of an eye, the end of the wire not being in contact with any portion of the bend, but separated therefrom sufficiently for the free passage of the thread between said end and the adjacent portion of the bend. This eye is arranged opposite, in line with and near the end of the spindle, and is, according to the preferred arrangement of the friction-pad, somewhat lower than its upper portion, being about level with the channel of the delivery-eye *b*. The spiral bend of the eye is in the opposite direction from that in which the cop is wound. Hence, as the thread is unwound from the cop over the friction-pad through the delivery-eye *b*, it will pass into the guide *e*, which controls the thread and regulates the frictional contact.

It will be observed that in the use of this thread-guide and friction device no additional labor is entailed upon the attendant.

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

The combination, with a shuttle having a spindle, B, delivery-eye *b*, and friction-pad *a*, of the threading-guide *e*, constructed as shown, all arranged and operating together substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS CHEETHAM.

Witnesses:

JOHN GARNER,

LINNEUS CHEETHAM.