

(No Model.)

O. A. STEERE.
TENSION DEVICE FOR LOOM SHUTTLES.

No. 466,631.

Patented Jan. 5, 1892

Fig. 1.

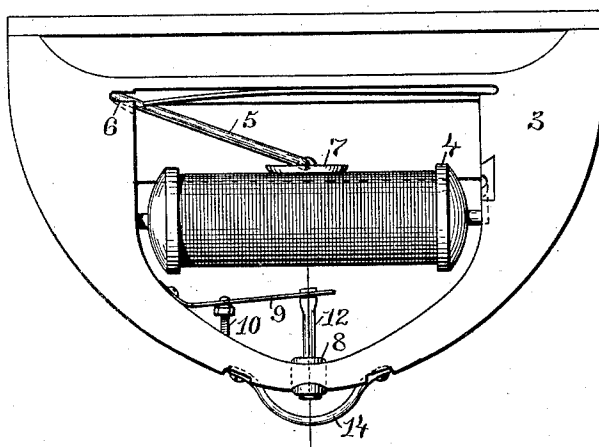
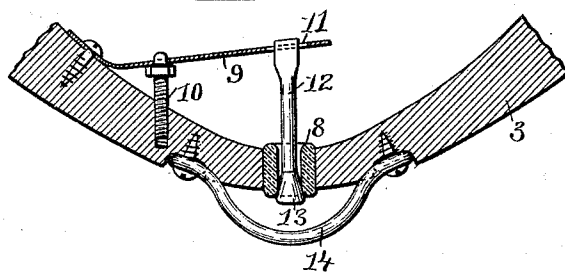


Fig. 2.



WITNESSES:

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OSCAR A. STEERE, OF PAWTUCKET, RHODE ISLAND.

TENSION DEVICE FOR LOOM-SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 466,631, dated January 5, 1892.

Application filed April 27, 1891. Serial No. 390,555. (No model.)

To all whom it may concern:

Be it known that I, OSCAR A. STEERE, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Tension Devices for Loom-Shuttles; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in tension devices for shuttles.

The object of this invention is to produce a simple adjustable tension device for shuttles which will avoid the difficulties hitherto experienced from the thread becoming entangled with the shuttle mechanism. To attain this end I have invented certain novel features of construction and combination of parts, which will hereinafter be more fully described, and pointed out in the claim.

Figure 1 is a view of a so-called "positive-motion shuttle" with the improved tension device attached to the same. Fig. 2 is an enlarged sectional view of a portion of the shuttle-frame, more clearly showing the construction of the tension device.

In the shuttles used on what are known as "positive-motion looms" much inconvenience has been caused by the thread forming into a loop at the end of the shuttle-stroke and catching in the tension device before the return of the shuttle would take up the slack. This has been the case especially when highly finished or glazed thread has been used. It is for the purpose of overcoming this defect and consequent delay or damage that I have conceived my invention, which I will now proceed to more definitely describe.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 3 indicates the shuttle-frame, in which is secured a shaft carrying the revolving bobbin 4. The old style of tension device, which may be used in addition to my improvement, consisted of a spring-operated arm 5, pivotally secured in a slot 6, cut in

the shuttle-frame and provided with a shield 7, pivotally secured thereon and pressing against the thread on the bobbin 4. In the apex of the shuttle-frame was secured an eye or guide 8, through which the thread passed.

In carrying out my invention I secure a flat spring 9 to the inner surface of the shuttle-frame. This spring is provided with a small perforation to receive the spur end of the adjusting-screw 10, also secured in the shuttle-frame, and near the free end of the spring a slot 11 is cut to receive the flattened end of the plunger 12, having the pear-shaped head 13. This plunger is passed through the eye 8 and the flattened end passed through the slot 11 in the spring. The flattened end is then bent over the lower surface of the spring, allowing the resilience of the spring to keep the plunger down and the outer surface of the pear-shaped head in contact with the inner surface of the eye 8. On the outer surface of the shuttle-frame and extending over the eye 8 I secure the guide-wire 14, which is adapted to keep the thread on one side of the shuttle and prevent its winding itself around the plunger. It will be readily understood that by passing the thread through the eye 8 and adjusting the screw 10 to bring a proper pressure on the pear-shaped head of the plunger 12 the thread in the shuttle will be subjected to a constant tension, but may be readily removed from the shuttle in the proper way.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a shuttle, the combination, with the guide 8 and the guide-wire 14, secured in the apex of the shuttle-frame, and the headed plunger 12, movable in the guide 8, of the spring 9, operating said plunger, and the set-screw 10, adapted to adjust the pressure of the spring, as described.

OSCAR A. STEERE.

Witnesses:

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