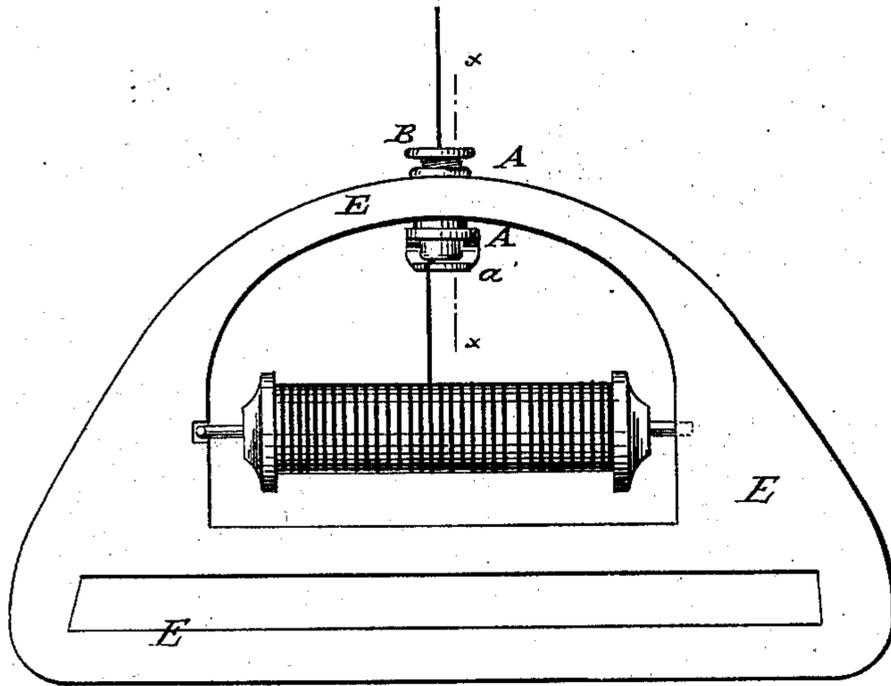


C. J. SCHURHECK & C. A. STEVENSON.  
Loom-Shuttle.

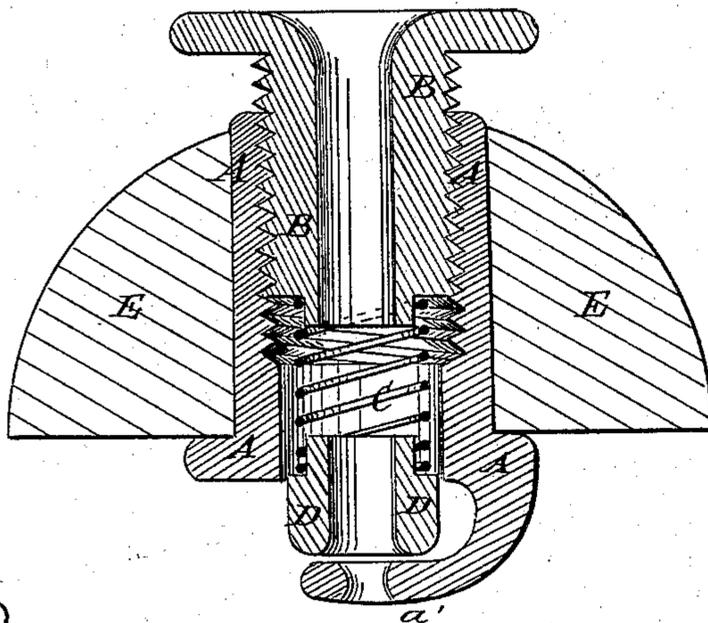
No. 203,653.

Patented May 14, 1878.

*Fig: 1.*



*Fig: 2.*



WITNESSES:

*Chas. Kiehl*  
*C. Sedgwick*

INVENTOR:

*C. J. Schurheck*  
*C. A. Stevenson*

BY *Munroe*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES J. SCHURHECK AND CHARLES A. STEVENSON, OF NEW YORK, N. Y.

## IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **203,653**, dated May 14, 1878; application filed February 6, 1878.

*To all whom it may concern:*

Be it known that we, CHARLES J. SCHURHECK and CHARLES A. STEVENSON, of the city, county, and State of New York, have invented a new and useful Improvement in Tension Devices for Loom-Shuttles, of which the following is a specification:

Figure 1 is a side view of a loom-shuttle to which our improvement has been applied. Fig. 2 is a detail section of the tension devices enlarged, taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish loom-shuttles with tension devices so constructed and arranged as to give a uniform tightness to the thread whatever part of the bobbin it may be unwinding from, and which shall be simple in construction, convenient in use, effective in operation, and easily adjusted to give any desired strain to the thread.

The invention consists in the combination of the hollow screw-plug, the spiral spring, and the ring with the eye of a shuttle and its notched head, as hereinafter fully described.

A is the eye, which is inserted in a hole in the front of the shuttle E, and which has a head, *a'*, formed upon its inner end. The head *a'*, upon one side, is cut away and deeply notched, said notch extending past the center.

In the inner surface of the outer part of the

eye A is formed a screw-thread, into which fits a screw-thread formed upon the outer surface of the hollow plug B. The hollow plug B has a ring-flange or head formed upon its outer end for convenience in turning it in and out. To the inner end of the plug B is attached or against it rests the end of a spiral spring, C, the other end of which is attached to or rests against a ring, D, so as to press the said ring against the inner side of the head *a'*. The thread from the bobbin is passed between the ring D and the head *a'*, and is then passed out through the ring D, the spiral spring C, and the hollow plug B, so that its tension may be easily regulated by adjusting the said plug B. With this construction the tension of the thread will be the same when it is unwinding from the center and from the end parts of the bobbin.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the hollow screw-plug B, the spiral spring C, and the ring D with the eye of a shuttle provided with a notched head, *a'*, substantially as herein shown and described.

CHARLES J. SCHURHECK.  
CHAS. A. STEVENSON.

Witnesses:

JAMES T. GRAHAM,  
C. SEDGWICK.