No. 713,587. Patented Nov. 18, 1902.

J. AUTH.

SHUTTLE FOR LOOMS.

(Application filed Mar. 6, 1902.)

(No Model.)

Fig. 1.

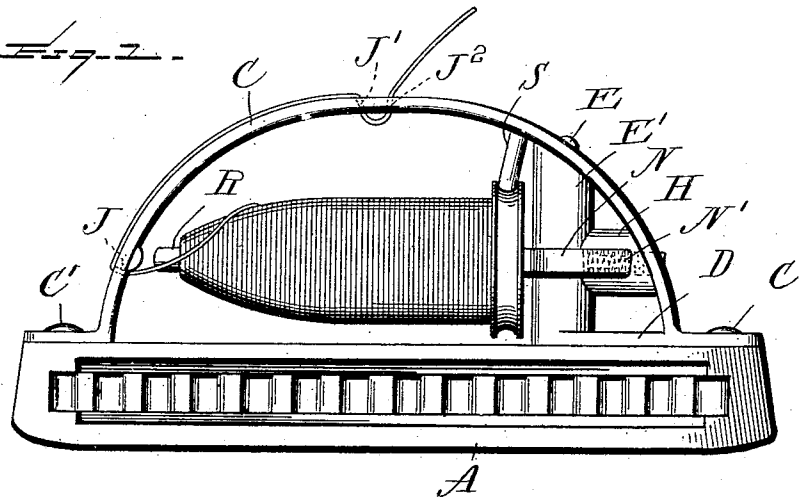


Fig. 2.

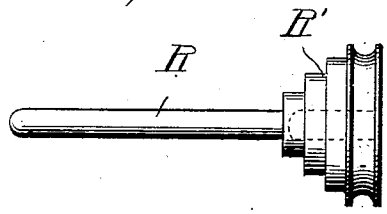
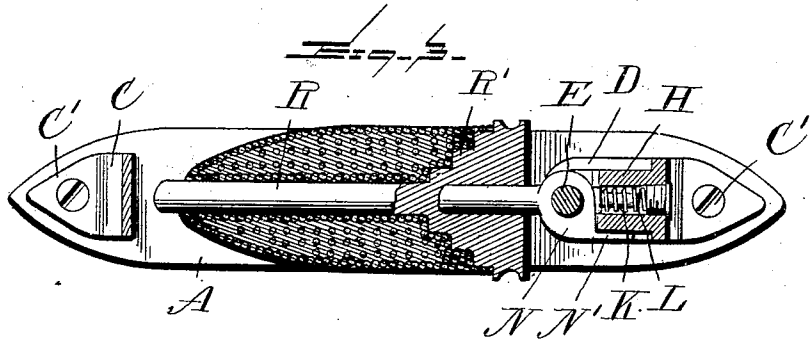


Fig. 3.



WITNESSES:

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SHUTTLE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 713,587, dated November 18, 1902.

Application filed March 6, 1902. Serial No. 96,952. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH AUTH, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Shuttles for Looms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in shuttles for looms; and it consists in the provision of means whereby the bobbin may be easily connected to or detached from the shuttle, means being provided to hold the shuttle upon the tongue while it is being rotated and from which the thread is being unwound.

The invention comprises various details of construction, which will be hereinafter fully described and then specifically defined in the appended claim, and is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved shuttle. Fig. 2 is a detached view of the spindle. Fig. 3 is a horizontal sectional view through the bow to the shuttle and longitudinally through the bobbin.

Reference now being had to the details of the drawings by letter, A designates the reciprocating shuttle-chamber, made of any suitable material and provided on one side with a groove serving as a guide and on the opposite side with a series of rack-teeth, which are adapted to be engaged in the usual manner by pinions gearing with the shuttle-driving rack on the lay.

Secured to the upper surface of the shuttle is a bow C, fastened by means of screws C′ to said shuttle, and projecting horizontally from one end of said bow is a bracket-arm D, the forward free end of which is upwardly turned and centrally recessed to receive one end of the pivotal bolt E, which bolt passes through the bow and through a downwardly-projecting lug E′ on the bow. Projecting horizontally from the bow, slightly above the projecting part in which the bolt E has a bearing at its lower end, is a lug H, and mounted in said lug is a spring-actuated bolt K, about which a spring L is mounted, which is adapted to throw said bolt at its farthest outward limit. Pivotally mounted on said bolt E is a tongue N, which has a rearwardly-projecting portion N′, which is adapted to abut against the side of the horizontal projection H when said tongue is held longitudinal with the shuttle and adapted to limit the lateral swinging movement of said tongue in one direction. R designates a spindle having a pulley R′, with a grooved base portion fastened to one end thereof, said spindle being hollow a portion of its length and adapted to telescope over the end of said tongue. Projecting downwardly from the under edge of the bow is an integral pin S, the free end of which is disposed in the groove of the base portion of the pulley R′, whereby said spindle may be held upon the tongue. The thread which is wound upon the spindle of the bobbin passes through the apertures J, J′, and J^2 in the bow in the manner illustrated.

From the foregoing it will be observed that the spindle which is carried upon the tongue may be swung laterally or at right angles to the length of the shuttle, and the spindle may be readily removed from the tongue and a new bobbin placed thereon, and as the tongue, with the spindle or bobbin mounted thereon, is swung back into a position longitudinally with the bow the spindle will be held securely in place, and the spindle and tongue are prevented from swinging beyond the longitudinal center of the bow by means of the projecting lug on the pivoted end of the tongue. The spring-actuated bolt is adapted to bear yieldingly against the pivoted end of the tongue and hold the bobbin in its correct operative position.

From the foregoing it will be observed that by the provision of a shuttle made in accordance with my invention the bobbin may be readily removed and the new one placed thereon and securely held in place by the means before described and shown in the accompanying drawings.

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

A shuttle for looms comprising a body por-

tion, a bow secured thereto, an upright post E′ rising from the end of a bracket-arm D, a bolt E passing through said post, a tongue N pivotally mounted on said bolt having an integral arm N′ and a portion H against which said projecting part N′ is adapted to contact to hold the tongue centrally and longitudinally with the body portion, a coil-spring seated in the recessed portion of the part H and bearing against the pivotal end of the tongue, a spindle, having a grooved base portion with a hole therein to receive said tongue, an integral pin S projecting from the under side of the bow and adapted to engage the groove of said spindle, substantially as shown and for the purpose set forth.

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

JOSEPH AUTH.

Witnesses:
J. W. MITCHELL,
GEORGE EXTERKAMP.