

R. BLAKE.
Shuttles for Sewing-Machines.

No. 154,117.

Patented Aug. 18, 1874.

Fig 1.

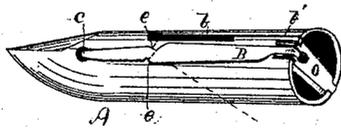


Fig 2.

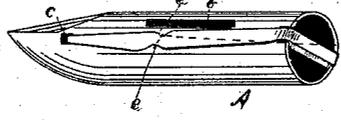
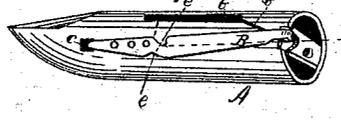


Fig 3.



Witnesses:
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ROBERT BLAKE, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 154,117, dated August 18, 1874; application filed June 17, 1874.

To all whom it may concern:

Be it known that I, ROBERT BLAKE, of Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Shuttles for Sewing-Machines; and I do hereby declare that the following specification, taken in connection with the drawing furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention consists in a tension-spring notched at its opposite sides so as to allow the thread to be drawn diagonally about it, when combined with a shuttle, having a removable journal-bearing, as hereinafter set forth.

Referring to the drawings, Figure 1 represents a shuttle with my improved spring-tension device hinged to the end piece, which forms a cap and one of the journal-supports of the bobbin within. Fig. 2 represents the application of the spring to the shuttle, one end of which extends over the heel of the latter, filling a niche, in which it is held and secured. Fig. 3 represents the application of the spring with a detachable end support.

The spring B is formed of any suitable material usually employed for such or similar purposes, and formed by dies or other means. The notches *e e* are formed on opposite sides of the spring, and arranged in a manner to secure the passage of the thread diagonally across the face of the spring, preventing the thread from crossing itself, which would interrupt its free action, and cause the same to break. The spring should be so made as to bear with an elastic pressure upon the thread as it passes

between it and the shuttle A, in the same or similar manner as those springs through which thread is laced. This tension-spring may be secured to the shuttle by hooking into an eye, *c*, near the forward or tapering end of the shuttle, while the opposite end may be hinged to the cap-piece, *o*, as in Fig. 1, or it may be formed as in Fig. 2, extending over the end or the heel of the shuttle, and held by a deflection in the latter, or both.

In Fig. 3 the spring is represented as secured to the shuttle in a manner to admit of being swung sidewise, for the purpose of passing the thread under it for its adjustment. Slits *b* are also represented in Figs. 1 and 3, to enable the operator to perform the operation of threading the shuttle without lacing. This slit is conveniently made by sawing, extending from the heel at a point under the tension-spring, as in Fig. 3, or beside it, as in Fig. 1, to the opening *b*, in which the thread plays, as it reels off from the bobbin toward the tension device.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, with the open-ended shuttle, of the tension-spring, notched at the opposite sides, so as to guide the thread diagonally across the spring, and with the removable journal-bearing supported by said spring, substantially as set forth.

ROBT. BLAKE.

Witnesses:

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