

W. T. ELLIOTT.  
Sewing-Machine Shuttle.

No. 220,816.

Patented Oct. 21, 1879.

Fig:1.



Fig:2.

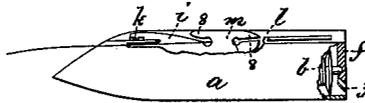
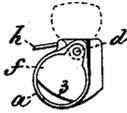


Fig. 4.



Fig:3.



Witnesses.  
A. E. Whitney.  
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Inventor.  
William T. Elliott.  
By Crosby & Gregory Atty

# UNITED STATES PATENT OFFICE.

WILLIAM T. ELLIOTT, OF ORANGE, MASSACHUSETTS, ASSIGNOR TO THE GOLD MEDAL SEWING MACHINE COMPANY, OF SAME PLACE.

## IMPROVEMENT IN SEWING-MACHINE SHUTTLES.

Specification forming part of Letters Patent No. 220,816, dated October 21, 1879; application filed July 10, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM TAYLOR ELLIOTT, of Orange, county of Franklin, State of Massachusetts, have invented an Improvement in Sewing-Machine Shuttles, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to shuttles for sewing-machines, and has for its object the improvement of the devices for holding the bobbin in place, and permitting its easy application and removal.

The bearing for the bobbin in the heel of the shuttle is attached to a rod fitted to slide longitudinally in the body of the shuttle and to be rotated therein, and the rod provided with a head is acted upon by a spiral spring which surrounds it so as to move it in that direction which will keep the heel-bearing drawn toward the center of the shuttle.

Figure 1 represents in top view and partial section a shuttle provided with my improvement; Fig. 2, a side elevation, also partially in section; Fig. 3, an elevation of the heel of the shuttle, the heel-bearing being shown turned out in dotted lines as for the removal or introduction of a bobbin; and Fig. 4 is a detail showing the method of connecting the end of the tension-spring with the shuttle.

The shuttle body or shell *a* may be made in any usual way, so as to leave the heel of the shuttle-body open. Parallel with the opening for the reception of the bobbin *b*, as in Fig. 1, is made a passage or chamber, *c*, for the reception of the headed rod *d*, the forward end of which is extended through a bearing, *e*, and has fixed to it the heel-bearing plate *f* for the bobbin *b*, the said heel-bearing being shaped to fit within the open end of the shuttle, and being shortened to leave a tip, *3*, to be caught by the thumb or finger nail when the said heel-bearing is to be drawn out longitudinally from the end of the shuttle, so as to be turned with the rod *d*, and permit the said bearing to occupy a position as in dotted lines, leaving the heel end of the shuttle or the bobbin-receiving opening therein entirely unobstructed. This bearing-plate *f* has at its inner face a small depression suitable to receive the journal at one end of the bobbin, while the bobbin-

journal at its other end is received by and held in a like depression in the shuttle-body, all as usual. This headed rod is surrounded by a spiral spring, *g*, which, acting upon the head of the said rod and resting against the bearing-wall *e*, serves to keep the heel-bearing plate pressed toward the shuttle and within the shuttle-body when the bearing-plate is turned, so as to enter the opening at the heel of the shuttle.

The slack of the shuttle-thread is taken up by the guard *h*, about the curved edge of which the thread travels as usual.

Tension on the thread is produced and regulated by means of the tension-spring *i*, having its end bent and shouldered as at 10, Fig. 4, and entered into a suitable hole in the shuttle-body, the bent end of the spring acting as a pivotal point for it.

The eccentric-headed screw *k* acts to regulate the pressure of the said spring *i* toward a flat part or wall, *l*, of the said shuttle-body next the vertical face of the shuttle, between which and the spring the thread is drawn. The spring *i* is slotted, as shown, to obviate the use of eyes, and the slots are so made as to leave a T-shaped head, *m*, about which the thread is easily passed, the prongs *8* of the said head preventing the escape of the thread.

The head of the screw is so located as to be turned by means of a screw-driver to adjust the tension without removing the shuttle.

I do not broadly claim a shuttle-bearing or bobbin-holding plate adapted to be turned aside axially to uncover the bobbin-receiving opening in the said shuttle; nor do I claim, broadly, a spring pressed or held plate to act upon one end of a bobbin, as disk-bobbins have been so held within rotating hooks.

I claim—

1. The shuttle-body open at its heel end and provided with a passage or chamber, *c*, parallel with the bobbin-receiving opening in the shuttle, combined with the rod *d*, spiral spring, and heel-bearing, the said heel-bearing being provided with a ledge, *3*, and being adapted to be drawn out longitudinally from the shuttle-shell and to be turned aside axially to permit the removal or insertion of the bobbin, all substantially as described.

2. The shuttle-body provided with the flat-faced wall 7 at that side of the shuttle next its vertical face, combined with the eccentric-headed adjusting-screw and the tension-spring *i*, provided with the T-shaped head and bent end to form the pivotal point for the spring, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM T. ELLIOTT.

Witnesses:

R. D. CHASE,

A. H. BATES.