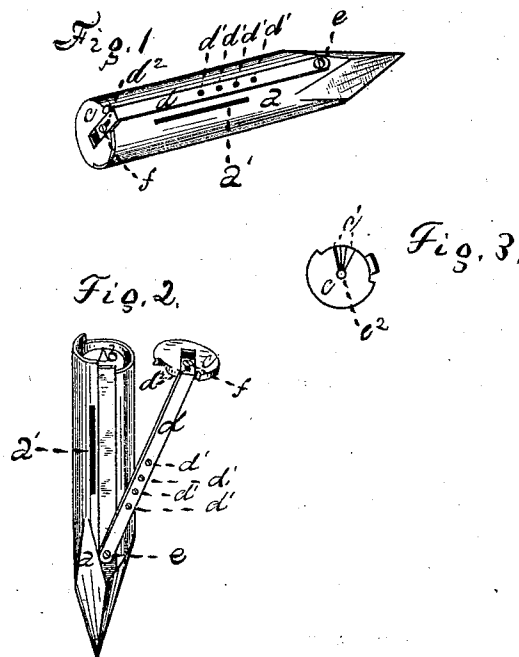


G. W. LOOMIS.

Shuttles for Sewing-Machines.

No. 152,041.

Patented June 16, 1874.



Witnesses.

John Pollitt
S. G. Simonds.

Inventor

George W. Loomis
By W. E. Simonds Atty

UNITED STATES PATENT OFFICE.

GEORGE W. LOOMIS, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO ROBERT H. ASHMEAD, OF SAME PLACE.

IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **152,041**, dated June 16, 1874; application filed February 4, 1874.

To all whom it may concern:

Be it known that I, GEORGE W. LOOMIS, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements pertaining to Sewing-Machine Shuttles, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a perspective view of the shuttle embodying my said improvements closed. Fig. 2 is a view of the same shuttle opened. Fig. 3 is a view of the inner face of the cap.

The shuttle is one of the kind known as a closed shuttle in distinction from the open or boat shuttles used in some sewing-machines.

The invention consists in the parts and combinations of parts specified in the claim at the end of this specification.

The body of the shuttle *a* is much like the body of any closed shuttle, open at the butt. The bobbin *b* is seen inside in Fig. 2. The cap *c*, which closes the butt-end, is attached to the end of the arm *d*, the opposite end of which is pivoted at *e* to the outside of the body of the shuttle, so that this arm bearing the cap *c* can swing to one side, as shown in Fig. 2. The arm *d* is a spring, and tends to draw the cap toward that side of the shuttle on which

this arm is situated, so that when the cap is swung into position shown in Fig. 1 it springs or snaps into place, and is thereby held securely in place. The inner face of the cap *c* has a groove, *c*¹, running from the circumference to the center, and diminishing in breadth to the center, forming a guide, which directs the arbor of the bobbin to the center or bearing *c*². The thread comes from the bobbin out through the slot *a*¹, and gets its tension by being passed through a greater or less number of the holes *d*¹ in the arm *d*. The tension can be increased by adjusting the arm *d* toward the body of the shuttle. Such adjustment can be regulated by means of the screw *f* running through the slot *d*² in the arm into the cap. The shape of the butt-end of the shuttle is such that when the cap *c* is swung into place the corners and sides of the shuttle, as a whole, are regular and unbroken.

I claim as my invention—

The combination of the body *a* with the perforated spring-arm, adjustably connected to the cap, when arranged to operate as set forth.

Witnesses: GEORGE W. LOOMIS.

WM. EDGAR SIMONDS,

JOHN POLLITT.