W. W. WELLS.

Sewing-Machine Shuttle.

No. 106,752. Patented Aug. 23, 1870.

Fig. 1

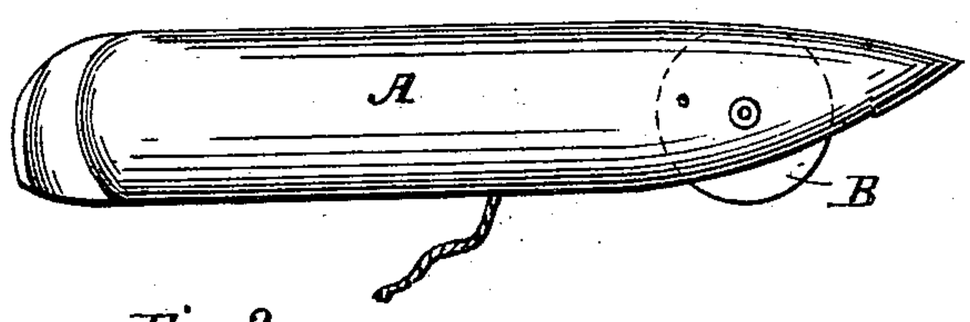


Fig. 2.

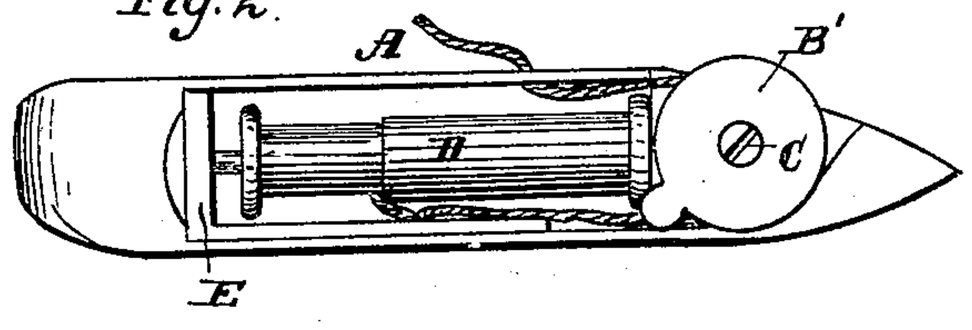


Fig. 3.

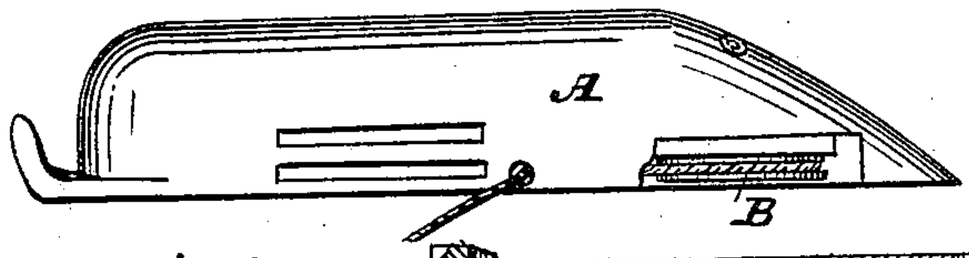


Fig. 6.

Fig. 5.

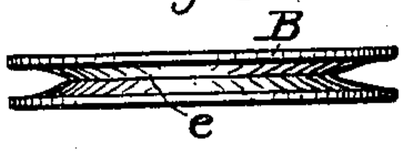


Fig. 7.

Fig. 4.

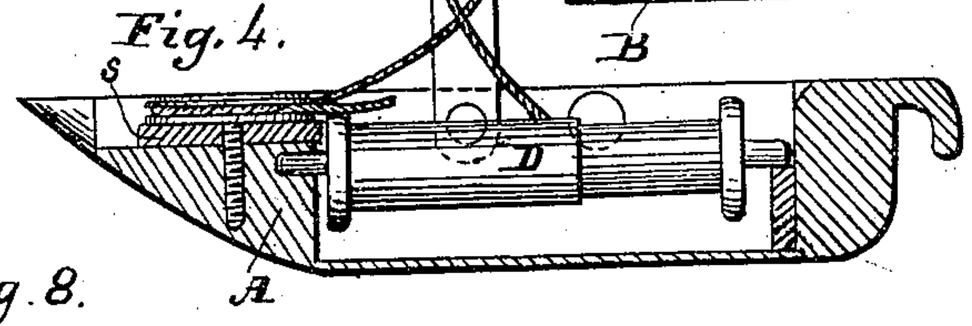


Fig. 8.

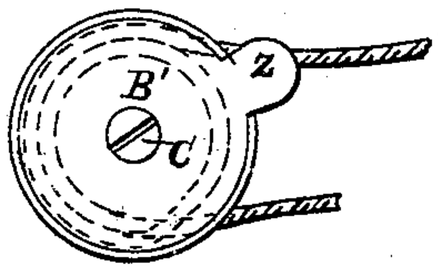
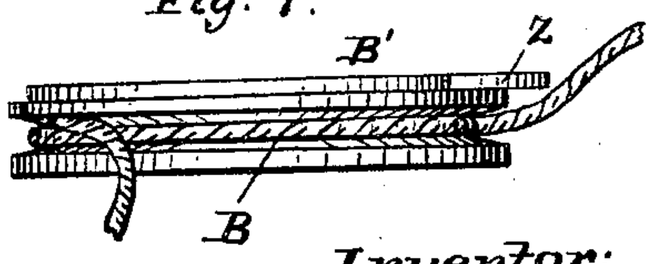


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM W. WELLS, OF WEBSTER CITY, IOWA.

IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **106,752**, dated August 23, 1870.

To all whom it may concern:

Be it known that I, WILLIAM W. WELLS, of Webster City, in the county of Hamilton and State of Iowa, have invented a new and valuable Improvement in the Shuttles of Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top view of my shuttle. Fig. 2 is a bottom view of the same. Fig. 3 is a side view. Fig. 4 is a longitudinal vertical section. Figs. 5, 6, 7, 8, and 9 are details.

My invention relates to means for regulating the tension of the shuttle-thread of sewing-machines; and it consists mainly in passing the thread around a pulley attached to the shuttle, and so constructed that it can be loosened or tightened at will.

The letter A of the drawings designates the shuttle of a sewing-machine; D, the bobbin, secured therein by means of the pivoted clamp E, provided with the perforations *n n*, through which the thread from the bobbin is passed.

B is the tension-pulley, around which the thread is carried in the manner shown. The pulley B is pivoted to the forward portion of the shuttle by means of the screw *c*. Between the pulley and the portion of the shuttle into which the screw is inserted is placed a soft leather cushion or washer, *s*. The upper surface of the pulley is made with a dish or inward slope, and a stout cap, B′, with a corresponding conical or sloping under surface, is arranged thereon, being held to its seat by the screw *c*. The plane surface of the cap B′ is made flush with the base of the shuttle. It is countersunk to receive the head of the screw *c*, and is provided with a lug, *z*, which operates as a guide to the thread and to prevent the cap from turning with the pulley. The channel or groove *e* in the edge of the pulley is made deep, and the sides thereof meet at the bottom at an acute angle. The pulley may be made large enough to carry the coarsest thread. It is easily regulated and with certainty. It will last for a long time, and, should it become loose from wear, may be readily set up by turning the screw.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the tension-pulley B, fixed washer B′, having lug *z*, screw *c*, cushion *s*, and shuttle A, when constructed and arranged to operate as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

W. W. WELLS.

Witnesses:

A. A. WICKS,

H. MCKEE.