

G. A. EDWARDS & G. SCHIEDER.

Shuttles for Sewing-Machines.

No. 136,311.

Patented Feb. 25, 1873.

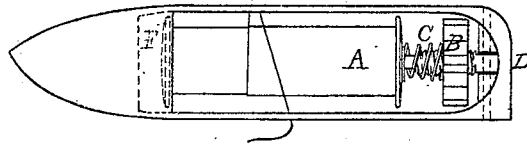


Fig 1.

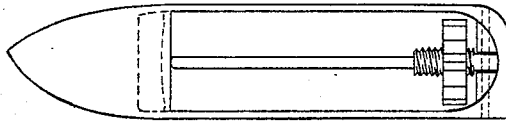


Fig 2.

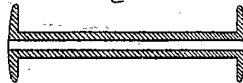


Fig 4.



Fig 5.

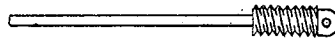


Fig 3.

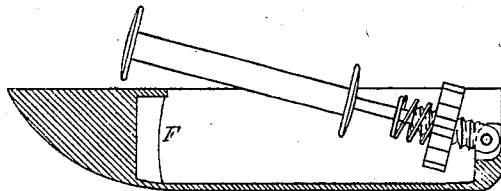


Fig 6.

Witnesses.

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GEORGE ANSEL EDWARDS AND GEORGE SCHIEDER, OF SYRACUSE,
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IMPROVEMENT IN SHUTTLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 136,311, dated February 25, 1873.

To all whom it may concern:

Be it known that we, GEORGE ANSEL EDWARDS and GEORGE SCHIEDER, of Syracuse, New York, have invented certain Improvements in Bobbin for Sewing-Machines, of which the following is a specification:

Our invention relates to shuttles for sewing-machines; and consists in means herein-after described for governing the tension of the thread carried by it and acting on the bobbin.

Figure 1 represents a shuttle, of similar shape used by all first-class sewing-machines, with improvements claimed inside or in the hollow of the shuttle, and in their proper position for operation, and the whole compact and ready to be placed in the shuttle-carrier of a sewing-machine.

A is the bobbin, filled with thread, and turning upon an adjustable axle, which latter is shown in Fig. 2. B is a burred nut, (also Fig. 5,) which may be turned at option, to the right or left, as different tensions to the thread may require, said burred nut moving by a thread cut upon a larger part of the same axle, Fig. 3.

Screwing up the burred nut B, it will be seen that its face operates against the small wire spring C coiled around aforesaid axle. (See Fig. 1.) The spring C, thus effected by the pressure from the nut B, operates in turn against the end of bobbin A, which produces the effect desired.

A small washer of leather or other suitable substance is placed between the coiled spring C and the end of bobbin A to render the friction thus obtained as smooth as possible, in order to get a soft tension to the thread.

This pressure above described forces the opposite end of the bobbin A into the countersunk depression in the opposite end of the hollow in the shuttle, (also F, Fig. 6,) which depression is just the size and form (circular) of the end of the bobbin, thereby holding the bobbin A and spindle in their proper positions at this end of the hollow in the shuttle.

It is to be understood that the countersunk depression in the hollow at this end of the shuttle should be sufficiently deep to allow

the insertion of a piece of leather or other suitable material for this end of the bobbin A to bear against, for the same reason as stated before relative to friction, and thus to obtain a smooth tension for the thread being drawn from the bobbin.

The spindle is held in the shuttle by a small pin passing through the shuttle and through a small hole prepared, and just large enough to receive it, in this end of the spindle, which is flattened where the pin passes through, and which is inserted into a suitable cut in the solid part of the metal to receive it. This end of the spindle is held in the center of the hollow of the shuttle, right and left, but allowing the opposite end to be raised and lowered at will. (See Fig. 6.)

It is to be understood that the center of the round depression in the hollow of the point end of the shuttle should be exactly on a level and center with the pin and perpendicular cut holding the spindle in the opposite end of the hollow of the shuttle, thereby insuring the bobbin to run precisely in the center of the hollow of the shuttle.

To remove the bobbin A for a supply of thread, place the shuttle in the left hand, with the point of the shuttle from the person, with the forefinger of the right hand on the end of the bobbin nearest the person; press toward the person and draw upward. This pressure will act upon the coiled spring C, and will bring the bobbin out of the depression, and the bobbin and axle out of the hollow of the shuttle, so as to allow the bobbin to be slipped off the axle to be refilled.

To return the bobbin, slip the same on the axle, Fig. 6, and allow both to drop down, with the same action on the bobbin and spring as in removing the same, except that the pressure on the end of the bobbin nearest the person must be toward the person and downward until the bobbin springs into the depression made to receive it, when all is secured and ready for use.

Having described our invention, what we claim is—

1. The shuttle provided with the pivoted screw-threaded spindle, thumb-nut, and spring,

and with the depression F, into which the head of the bobbin may be pressed by the spring and nut, as described.

2. The principle of a bobbin long and hollow to receive an axle. (See Fig. 4.)

3. The principle of such a bobbin running on a movable and adjustable axle.

4. The principles for adjusting and confining said axle and bobbin in their proper positions in the shuttle for operation.

5. The principles of the burred nut and

coiled-wire spring in their several positions and offices, for obtaining any desired tension to the thread being reeled off of said bobbin; all of which principles as herein detailed and explained.

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GEORGE SCHIEDER.

Witnesses:

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