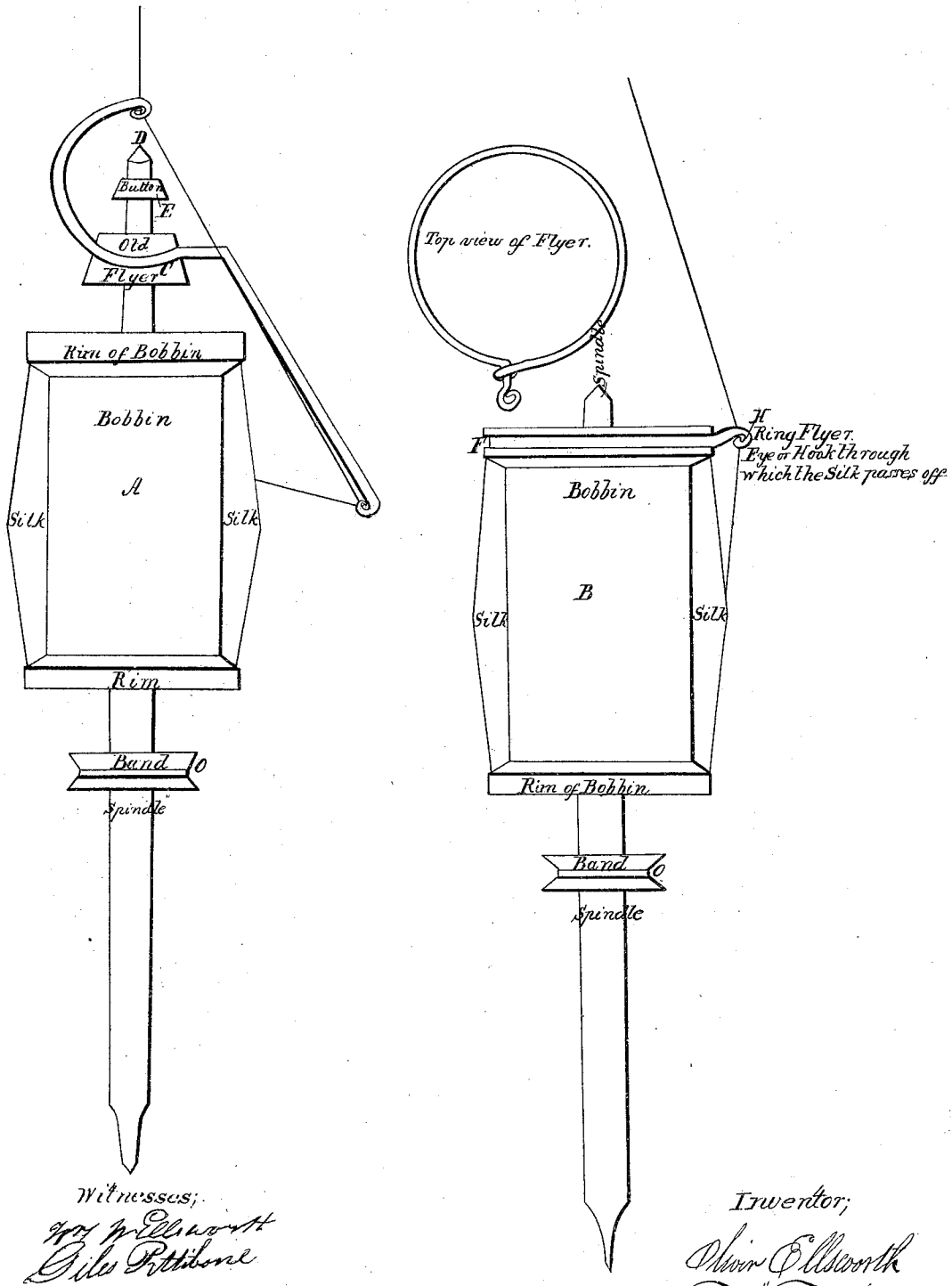


O. Ellsworth.
Spinning Silk.

N^o 1235.

Patented Jul. 12, 1839.



UNITED STATES PATENT OFFICE.

OLIVER ELLSWORTH, OF HARTFORD, CONNECTICUT.

FLIER AND BOBBIN FOR TWISTING SILK.

Specification of Letters Patent No. 1,235, dated July 12, 1839.

To all whom it may concern:

Be it known that I, OLIVER ELLSWORTH, of Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful improvement in the mode of twisting silk—viz., in substituting a ring and hook or quirk on the rim of the twisting-bobbin for the common flier now in use placed on the top of the bobbin in spinning or twisting silk; and I do hereby declare that the following is a full and exact description.

Figure A in the accompanying drawing represents the common spinning bobbin and flier in use in this country in silk manufacturing.

Fig. B represents the bobbin without the flier, but with my substitute.

It will be seen by referring to Fig. A that the old flier (letter C) which I propose to get rid of is made of a round block of wood with lead in the head of it to make it heavier, and a wire sunk into and around said block with the projection on arms; one ascending about half way of the bobbin and terminating in a hook or quirk and one extending in a curve around said block terminating over the end of the spindle, (letter D) in a like hook or quirk. When the bobbin turns one thread passes off first through the lower and then the upper quirk onto a shaft bobbin, the old flier being used to carry off the thread steadily and safely, and there is a button (letter E) on the top of the spindle to keep it from getting off. The objections to this flier, are, first, that the said wire arms or projections will straighten out if the flier turns faster than about three thousand turns a minute, and thus break the thread, and greatly derange and stop the business, causing delay, expense, labor, and care to start again; and, besides, there is no inconsiderable and useless expense in the original cost of the old flier and that part of the spindle which extends above the bobbin for the flier to turn upon, the flier being separable from the spindle and bobbin easily gets away, and is lost or injured. Now by my invention and improvement all these difficulties and objections are removed. I throw away the whole of the flier, button, and extended part of the spindle, (as will be seen by referring to drawing B,) I take merely the old bobbin without the old flier

and button, and make in the upper rim of the bobbin a groove (letter F) deep enough around the rim to receive a wire of about No. 16, which I prefer, though some other number and other metals may be used for that purpose, then make a wire ring in said groove loose enough to play with perfect ease, and fasten or unite the ends of this wire in a hook or quirk, (letter H) just enough extending out of the groove to receive the silk thread from the bobbin. The ring must not be loose enough to get out of the groove; when the bobbin is thus furnished with my ring flier (as represented in Fig. B) it may be set in motion by a band placed around pulley letter O by any power, the bobbin and spindle (to which the bobbin is firmly fixed) turns around with great rapidity (as above mentioned) and may safely be turned from six to eight thousand turns per minute, while the silk, (one end being made fast to a receiving bobbin placed above), is rapidly twisted running through my hook or quirk from the bobbin, as represented in the drawing, to the receiving bobbin above.

The speed of the bobbin and flier may be eight thousand turns to the minute, and nothing changes or gives way. No wires spread, or threads break, and no injury is done to the machinery.

The expense of the old flier and button and so much of the part of the spindle as is needed only for the flier, is saved; nor is there any danger of losing the ring, it being made smaller than the rim of the bobbin in which it plays.

By my improvement one frame will do the work of two at least in the old way, so that in many respects there is a great saving made by using my improvement.

I do not claim the bobbin, the spindle, the ring and hook or any of the parts separately, as they have long been known; but

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

The ring and hook or quirk in combination with the bobbin in the manner and for the purpose herein described.

OLIVER ELLSWORTH.

Witnesses:

WM. W. ELLSWORTH,
P. W. ELLSWORTH.