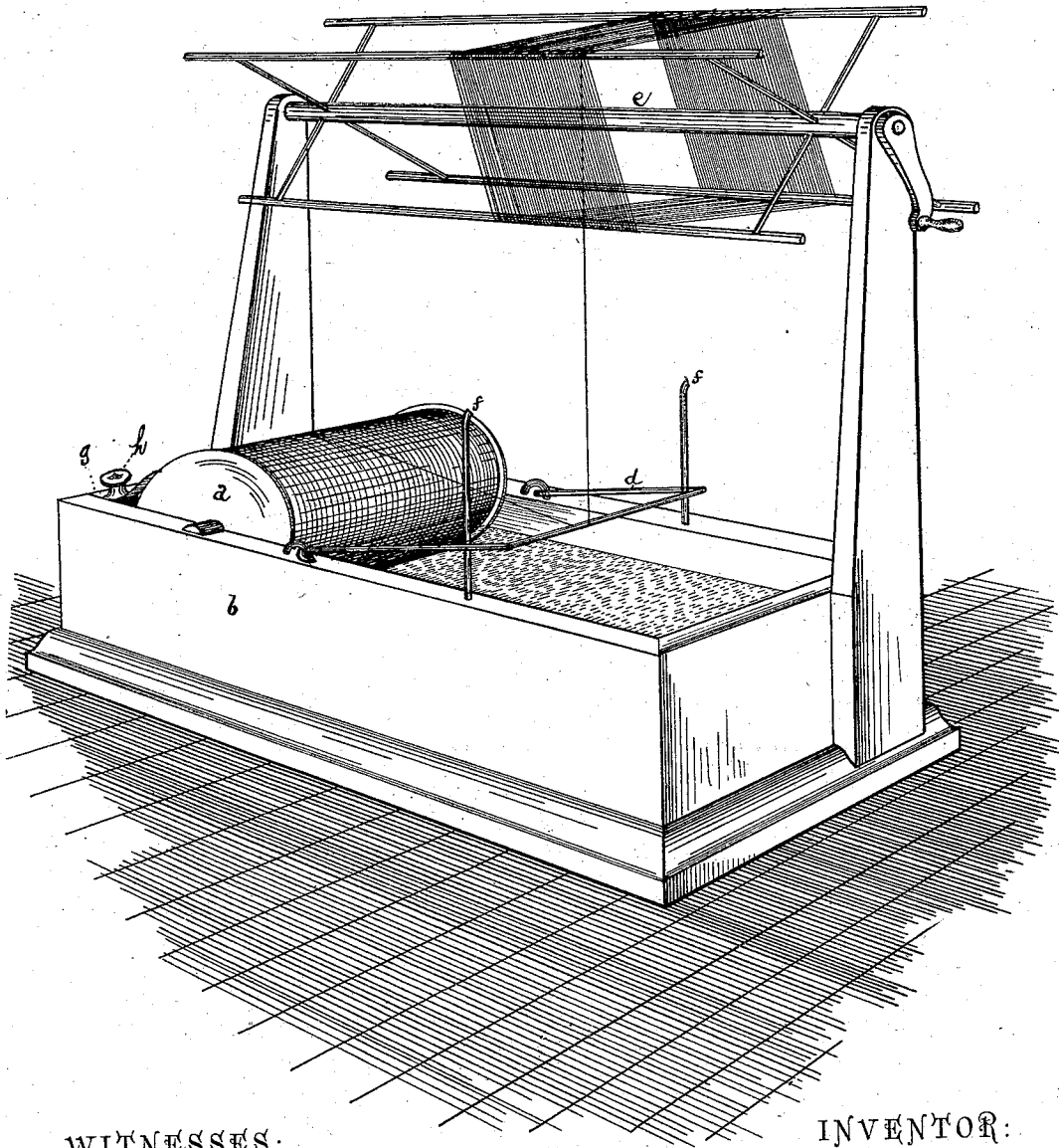


J. S. MACFARLANE.

MACHINES FOR WINDING AND STRETCHING SILK THREAD.

No. 187,653.

Patented Feb. 20, 1877.



WITNESSES:

Robt. F. Gaylord
Chas. Buckland

INVENTOR:

James S. Macfarlane
By *W. E. Simonds*
Att'y.

UNITED STATES PATENT OFFICE.

JAMES S. MACFARLANE, OF MANSFIELD CENTRE, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR WINDING AND STRETCHING SILK THREAD.

Specification forming part of Letters Patent No. **187,653**, dated February 20, 1877; application filed September 13, 1876.

To all whom it may concern:

Be it known that I, JAMES S. MACFARLANE, of Mansfield Centre, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements pertaining to the Manufacture of Silk Thread, including organzine, machine-twist, and other varieties of silk thread, of which the following is a specification, reference being had to the accompanying drawing, which shows an apparatus for putting my invention into practice.

The bobbin *a*, bearing the doubled and twisted strands which are to compose the finished thread, runs in a water-box, (by which I mean a box so far filled with water as to wet the silk upon the bobbin, to the end that the thread may better stand the stretching process) and the thread passes from the bobbin, under the tension-wire *d*, to and upon the reel *e*, forming into skeins.

I prefer that the tension-wire be a hinged loop, as shown in the drawing, lying upon the silk, and kept from rising too high by a stop-pin, *f*, so that its fall will operate as an indicator to the operator that the thread has broken.

The wetting of the silk puts it into proper condition for stretching and compacting. The running of the thread under the tension-wire furnishes all tension necessary for properly stretching organzine. By throwing the wire loop down toward a horizontal, where it can be kept by the stop-pin, the tension can be in-

creased. The thread, after being skeined upon the reel, is left to dry before removal.

Sewing-silk and machine-twist being heavier than organzine—that is, composed of a larger number of strands—require more tension than organzine. This can be had by multiplying the tension-wires, and making the thread run from one to the other before finally passing upon the reel.

As compared with prior devices for like purposes my herein-described device has certain distinctive features and advantages, one or both of which a machine must have to come within the scope of my improvement or invention, to wit: First, the running of the wetted thread in contact with a rounded surface, which acts, by direct contact with, and pressure upon, the surface of the thread, to compact, smooth, stretch, and polish it; second, the movement of the tension-wire, when the thread breaks, to act as an indicator of that fact.

With this explanation, I claim as my invention—

In combination, water-box *b*, bobbin *a*, hinged loop *d*, and reel *e*, all substantially as and for the purpose set forth.

JAMES S. MACFARLANE.

Witnesses:

A. W. BUCHANAN,
F. D. FENTON,