

(No Model.)

J. W. LOVATT.

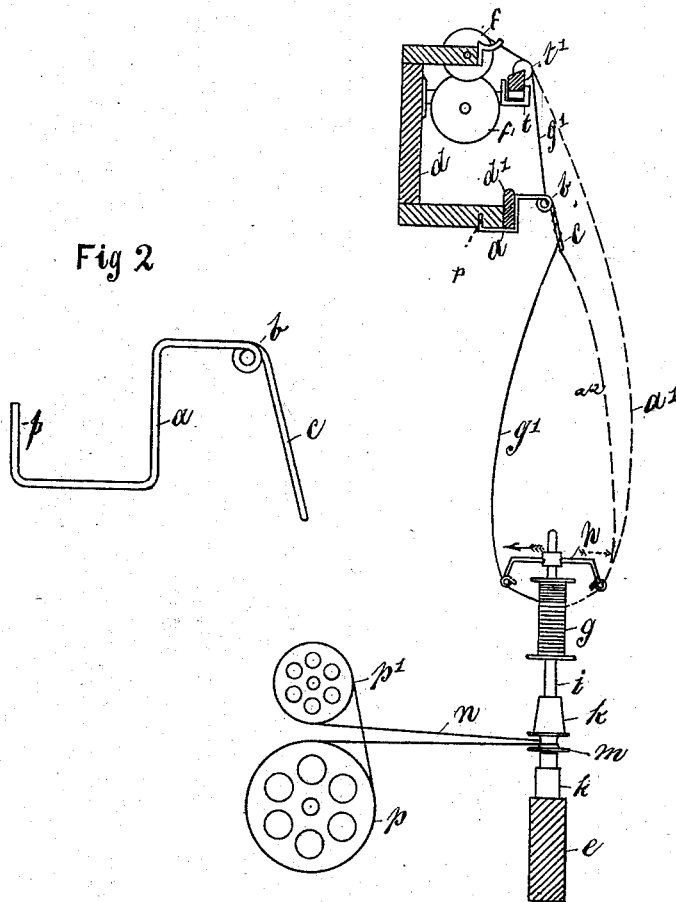
TENSION DEVICE FOR SILK SPINNING MACHINES.

No. 261,936.

Patented Aug. 1, 1882.

Fig 1

Fig 2



Witnesses

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# UNITED STATES PATENT OFFICE.

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## TENSION DEVICE FOR SILK-SPINNING MACHINES.

SPECIFICATION forming part of Letters Patent No. 261,936, dated August 1, 1882.

Application filed September 19, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES WALTER LOVATT, a citizen of the United States, residing at Paterson, Passaic county, State of New Jersey, have invented a new and useful Improvement in Tension Devices for Silk-Spinning Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to tension devices for regulating the tension of threads or strands of silk in silk-spinning machinery; and it consists in certain details of construction and arrangement of the several parts, as will be hereinafter more fully set forth in the specification and claims and pointed out in the accompanying drawings, in which—

Figure 1 is a sectional elevation of a portion of a silk-spinning machine with my invention applied thereto, and Fig. 2 is a detail perspective view of the tension device.

Referring more particularly to the drawings, *a* represents the tension device. This device consists of a wire of suitable size, having an eye, *b*, formed therein. The free end of the wire, below the eye, is cut at a suitable length to form the leader or loop end *c*. At the opposite side of the eye, where it is intended to connect the eye with the rail of the machine, the wire is bent at right angles, and is then bent squarely back under the rail and the extremity turned upward and inserted in an opening in the rail. By this means the wire is held in place against the rail. The device may, however, be applied and secured to spinning-machines in any suitable way.

A rail, *e*, supports the spindle *i*, and the whirl *k* is actuated by suitable band-pulleys, *p p'*, and band *n*.

*t'* is a guide-roller mounted upon the traverse-bar, supported in suitable bearings, *t*, secured to the frame of the machine.

*f'* is a friction-roller upon which the receiving bobbin or spool *f* rests and is rotated.

These several parts, aside from the tension device, are or may be of any suitable known construction, and are connected and operated in the usual manner.

The thread or strand *g'* is taken from the spinning-bobbin *g* upward and over the guide-roller *t'*, and is thence conducted to the receiving-spool *f*, upon which it is wound. The thread,

when the machine is started, or when the said thread has become broken and it becomes necessary to stop the whirl for the purpose of tying the thread, assumes the position shown in dotted lines *a'*, Fig. 1; but as the thread is carried around by the action of the flier *h* it strikes the tension device back of the eye, which obstructs the motion of the thread at that point, causing it to pass into the eye *b* and to wind around the leader *c* of said tension device and assume the position shown in *g'* and *a'*. The thread, as it passes off bobbin *g*, is twisted and wound upon bobbin *f*, the tension on same being regulated by the tension device, which is located between the delivery-bobbin and the taking-up bobbin. The eye *b* acts as a spring, and yields sufficiently to quick and sudden tension, so as to prevent the strand from breaking, and yet at the same time causes sufficient tension for the purpose required. The number of turns around the leader *c* can be regulated by the speed of the receiving-spool *f*. It can also be regulated to take a greater or less number of turns around the leader by bending the leader down toward the rail or extending it outward from the rail.

My device will work equally well with or without a flier on the spinning-machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A tension device for silk-spinning machines, consisting of a wire bent so as to fit the rail of the machine, the free part of said wire, opposite the rail, being bent, as described, so as to form a tension eye and leader for the thread, substantially as shown and described, and for the purpose set forth.

2. The combination, with mechanism for delivering yarn or thread and a mechanism for taking up the same, of the tension device located between such mechanism, one portion of said tension device being bent so as to conform to and be secured to the rail of the machine, the other portion being bent to form the eye *b* and leader *c* for the thread, substantially as shown and described.

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Witnesses:

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