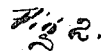
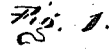


Embroidering Attachments for Sewing-Machines.
No. 142,478. Patented September 2, 1873

No. 142,478.



Witnesses:
H. R. Hattenberg.
W. L. [Signature]

Inventor:
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UNITED STATES PATENT OFFICE.

ALBERT W. JOHNSON, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN EMBROIDERY ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 142,478, dated September 2, 1873; application filed July 24, 1873.

To all whom it may concern:

Be it known that I, ALBERT W. JOHNSON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Embroidery Attachments for Sewing-Machines; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in embroidery attachment for sewing-machines; and the invention consists in attaching to the thread-carriers of a sewing-machine embroidery attachment an adjustable tension device, as hereinafter described, whereby the embroidery-thread, &c., may be evenly and accurately adjusted to any desired tension.

In the accompanying sheet of drawings, Figure 1 is a plan view of embroidery attachment with my improved tension device, and Fig. 2 a side elevation of same.

Similar letters of reference indicate like parts in the several drawings.

A represents an embroidery attachment; B B', the thread-carriers, which have an alternate parallel sliding motion, substantially as described in Letters Patent of the United States issued to me on the 11th day of October, 1870. To the rear end of each of the thread-carriers B B' is secured a thin elastic plate of metal, C, which I call a tension-plate, formed to correspond to the general outline of the shape of the rear end of the thread-carrier

B. The inner end of the plate C is screwed or riveted fast to the thread-carrier, and the outer end of said plate has formed in it a slot, *c*, the slotted end being slightly turned down. Secured to each of the thread-carriers is a screw, *d*, which passes through a hole in the tension-plate C. Onto this screw is fitted a thumb-nut, *e*.

My tension device being constructed substantially as above described, its operation is as follows: The embroidery-thread *k* from the spool *f* is passed into the slot *c* under the outer end of the tension-plate C, and thence through the openings *g h* in the fork of the carrier onto the fabric to be embroidered. In order to adjust the tension of the embroidery-thread *k*, it is simply necessary to screw down the thumb-nut *e*, when the tension-plate C is pressed down, confining the thread more or less between said plate and the thread-carrier. The tighter the thread is thus compressed the tighter will the tension be; and in this way the tension may be tightened or loosened by screwing up or down the thumb-nut *e*.

What I do claim as new, and desire to secure by Letters Patent, is—

The combination, with the reciprocating thread-carriers, of the elastic tension-plates C, bent and slotted at their ends, and adjusted by means of a screw and thumb-nut, as and for the purpose described.

ALBERT W. JOHNSON.

Witnesses:

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