(No Model.)

J. B. HIPWELL.

TENSION DEVICE FOR SEWING MACHINES.

No. 355,529. Patented Jan. 4, 1887.

Fig. 1.

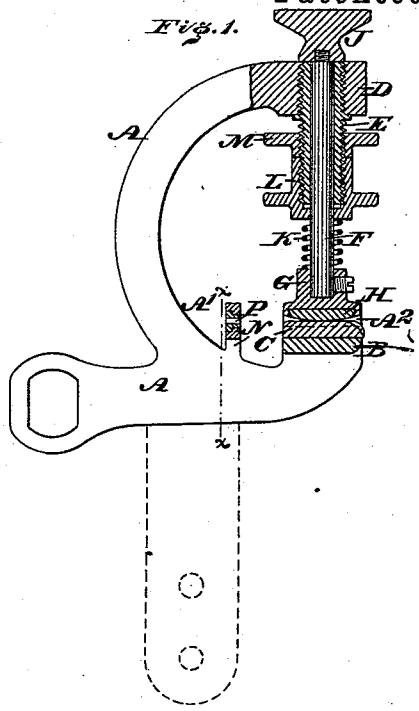


Fig. 2.

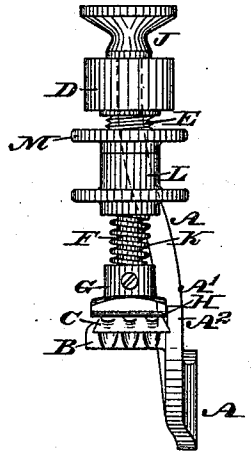
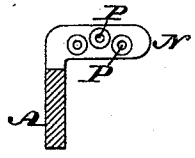


Fig. 3.



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TENSION DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 355,529, dated January 4, 1887.

Application filed March 4, 1886. Serial No. 193,951. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. HIPWELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Tension Devices for Sewing-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a partial side elevation and partial vertical section of a tension device embodying my invention. Fig. 2 represents a side elevation at a right angle to Fig. 1. Fig. 3 represents a vertical section of a portion in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to tension devices for sewing, seaming, or other similar machines; and it consists of novel features, as will be hereinafter fully described and definitely claimed.

Referring to the drawings, A represents an arm, which is provided with either a horizontal or vertical piece, A′, slotted or perforated, whereby it may be attached to a sewing, seaming, or other machine, or a support adjacent to such machine.

B represents a ledge or bed, which extends horizontally and laterally from the lower portion of the arm A, and has a face, C, whose upper side is grooved for the passage of thread or yarn from a spool, bobbin, &c., to the place of service, said grooves serving as guides, whereby the different threads may be readily kept apart, and also permitting a gripping action on the thread without flattening the same, as would be the case if drawn between two flat surfaces.

At the upper part of the arm is a boss, D, and from the same depends a sleeve, E, which is exteriorly threaded. Through said sleeve is freely passed a spindle, F, the lower end whereof carries a follower, G, whose under side has a face, H, it being seen that the latter is above the face C and in contact therewith. The upper end of the spindle carries a knob or button, J, whereby the follower G may be readily raised. Encircling the spindle is a spring, K, whose lower end bears against the follower G, and the upper end against an adjusting-nut, L, which, as will be seen, is fitted on the sleeve E.

M represents a jam-nut, which is fitted on the sleeve between the nut L and the boss D, and adapted to tighten against said nut L for preventing motion thereof.

Rising from the arm A, adjacent to the ledge B, is a guide, N, for the thread or yarn, the same consisting of an arm having eyes or openings, P, located in relation to the faces C H.

It will be seen that the follower G may be raised in order to place the thread or yarn between the faces C H, after which the follower is dropped, and the thread or yarn under pressure of the follower runs true through said faces, and is thus directed to the place of service, it being evident that should there be any inequalities in the thread or yarn the follower yields, and thus stoppage or breakage of the thread or yarn is prevented. Should the pressure of the spring be either insufficient or too severe, the nut L is properly rotated, so as to compress the spring to a greater extent, or relieve the same, as the case may require, after which said nut is retained in adjusted position by tightening the jam-nut thereagainst.

The faces C H are formed of glass, which is smooth and durable, not liable to be cut, and permits the passage of the thread or yarn with but little friction. They are connected with the ledge and follower, respectively, by dove-tailed joints, whereby they are securely held in position in a simple manner, and may be readily removed and replaced when worn or broken.

The portion A′ of the arm A extends diagonally from the boss D, and joins the ledge or bed B at one side thereof. From said side rises a flange, A^2, which guides the follower in its motions, and the opposite side of the bed is free and unobstructed, so that thread or yarn may be readily introduced between the faces C H, or removed therefrom, when desired.

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

1. A tension device for sewing-machines, having contact guiding-faces C and H, and means, substantially as described, for adjust-

ably supporting said face H, the said face C having a groove or grooves across the upper side of the same, all substantially as described.

2. An arm having a boss at top and a ledge or bed at bottom, a threaded sleeve depending from said boss, a spindle passing freely through said boss and sleeve, a follower connected with the spindle and located over the ledge, a spring pressing against the follower, an adjusting-nut bearing against the spring, and contact guiding-plates, said parts being combined, as described, forming an improvement in a tension device for a sewing, seaming, or other similar machine.

3. A tension device having the ledge B, with plate C, the adjustable follower G, with plate H, and the guide N, secured to the arm A, and having openings P, all of said parts being combined and arranged substantially as and for the purpose set forth.

4. In a tension device for sewing-machines, the arm A, having a horizontal ledge or bed, B, with a flange, A^2, rising from the side of the ledge, in combination with a follower, G, supported in said arm A, the said flange A^2 being adapted to serve as a guide for said follower, all substantially as described.

5. In a tension device, a follower secured to a spindle, the latter provided with a knob on its upper end, a boss secured to the upper arm of the device, a sleeve exteriorly threaded and inserted in said boss, a nut adapted to work on said sleeve, a spring bearing on said nut and follower, the said spindle working in said sleeve, and guiding-plates, one of which is secured to said follower and the other to the ledge or projection of the arm of the device, all substantially as and for the purpose set forth.

JOHN B. HIPWELL.

Witnesses:
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