JOHN BROMLEY.

Thread-Tension Mechanism for Sewing Machine.

No. 125,535. Patented April 9, 1872.

Fig. 1.

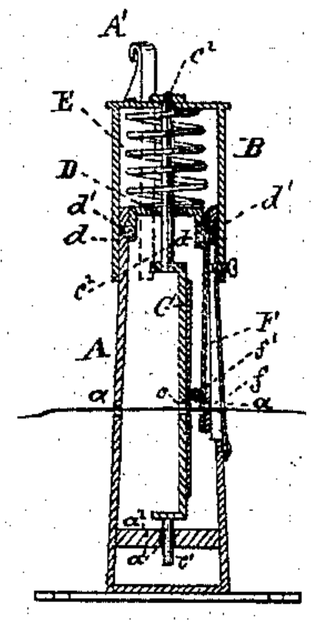
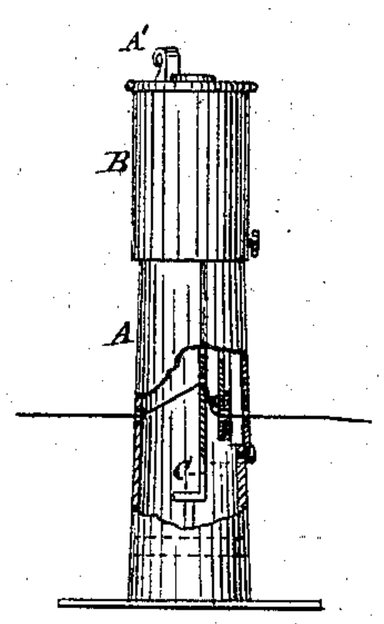


Fig. 2.



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125,535

UNITED STATES PATENT OFFICE.

JOHN BROMLEY, OF MACON, GEORGIA.

IMPROVEMENT IN THREAD-TENSION MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 125,535, dated April 9, 1872.

Specification describing a Thread-Tension for Sewing-Machines, invented by JOHN BROMLEY, of Macon, in the county of Bibb and State of Georgia.

The invention consists in a tension device for sewing-machines that will automatically adapt itself to any required thickness of thread, as hereinafter fully described and subsequently pointed out in the claim.

Figure 1 is a sectional elevation of my device in condition for threading, and Fig. 2 is a side elevation of the same in condition for use, with a portion of the case broken away so as to show the thread under tension.

A B represent two tubes, each closed at one end, and the latter working over the former. On the tube A is a spring-catch, A′, which passes through the top of tube B and catches thereon, and in opposite sides thereof are perforations *a a*. C is a plate faced with a piece of steel and perforated at *c*. This plate is provided on one end with a journal, c^1, which fits through a perforation, a^1, in a cross-plate, a^2, of tube A, and on the other end is provided with a prolongation, c^2, which projects through the top of tube B, where it is secured by a nut. D is a disk, having ears *d d*, by which it is fastened with screws *d′ d′* to the tube B; and E is a spiral spring, wound about the prolongation c^2. The disk D is also perforated, and thus forms a guide to the plate C as it is moved up or down, as well as a rest for the spring E. F is a flat spring, fastened preferably between an ear, *d*, and the tube A. This spring is perforated at *f*, and provided with a cross-rib, *f′*, just above said aperture. The four perforations register with one another when it is desired to pass the thread therethrough, but when the thread is being used the perforation *c* is slightly elevated and comes opposite the rib *f′*. The thread is thus deflected from a straight line and held by a yielding pressure, which adapts itself to any variation in the size of thread.

When the top tube B is pressed down the catch A′ holds it, so that the perforations are all aligned and the thread readily inserted. When the catch is unfastened the spiral spring brings into operation a very delicate tension. Of course the tension of the flat spring may be increased or diminished by a set-screw in the ordinary manner. The spiral and flat spring may be reversed in the tube, or arranged in various ways, without departing from the principle of my invention.

The cheapness of this device, and its facility for automatic adjustment to accommodate threads of varying thickness, render it a highly useful adjunct of sewing-machines.

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

The tension device for sewing-machines, consisting mainly of tubes A B, a spring-retracted perforated piece, C, and spring F, combined, constructed, and arranged substantially as and for the purpose described.

JOHN BROMLEY.

Witnesses:
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