

(Model.)

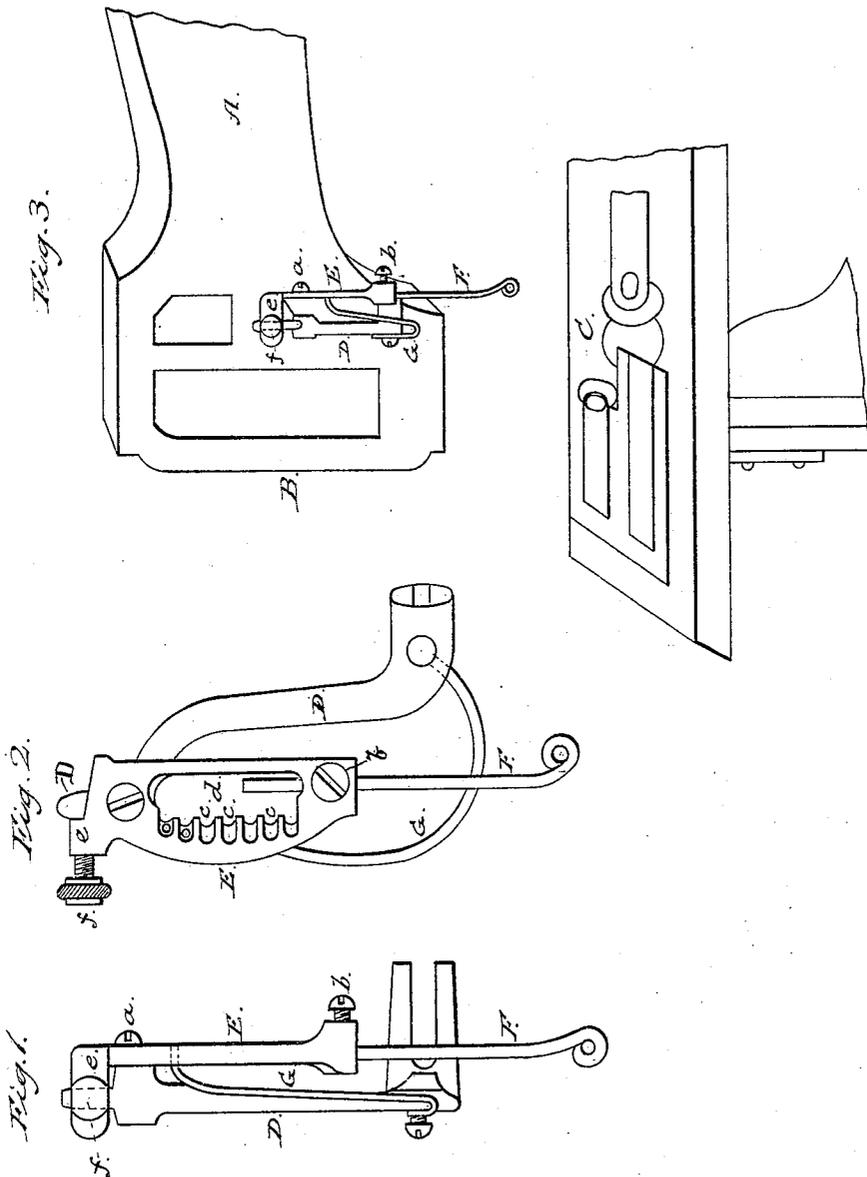
G. F. FOSS, Dec'd.

L. Foss, Administratrix.

TAKE-UP MECHANISM FOR SEWING MACHINES.

No. 291,708.

Patented Jan. 8, 1884.



Attest;
H. K. Howard
F. J. Chapman.

Inventor;
G. F. Foss,
Louisa Foss
Administratrix
by W. H. Babcock
Attorney

UNITED STATES PATENT OFFICE.

LOUISA FOSS, OF EAST BOSTON, MASSACHUSETTS, ADMINISTRATRIX OF
GEORGE FOX FOSS, DECEASED.

TAKE-UP MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 291,708, dated January 8, 1884.

Application filed July 25, 1883. (Model.)

To all whom it may concern:

Be it known that GEORGE FOX FOSS, deceased, formerly residing at East Boston, in the county of Suffolk and State of Massachusetts, did invent certain new and useful Improvements in Take-Up Mechanism; and I, LOUISA FOSS, as administratrix of said GEORGE FOX FOSS, do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to thread-tension devices of single-wax-thread sewing-machines; and it consists in a vertical arm suspended at top from and adapted to vibrate upon a stud projecting outward from a bracket secured to the side of the goose-neck of the machine, the lower end of said vibratory arm carrying a thread guide or eye, which is secured adjustably to it, while the arm itself is crowded away from the head of the machine by a spring, the tension of which is resisted by the thread. Provision is made for governing the length of vibration of the arm, in accordance with the length of the stitch taken, by the thread, and provision is also made in a simple manner for varying the stress and power of the tension-spring, the first of which consists in a screw screwing through the extreme upper part of the vibratory arm above its pivot, and abutting against the machine-head, while the latter consists in a series of notches in the arm at variable distances from its pivot, and adapted to receive the head of the spring.

In the accompanying drawings, Figure 1 represents a front view of the improved take-up mechanism; Fig. 2, a side view thereof; Fig. 3, a front view of the same, a part of the goose-neck and head to which is attached, and a part of the work-table.

In said drawings, A represents a portion of the goose-neck of a single-wax-thread sewing-machine, and B the head of such goose-neck, while C is the work-table thereof.

In carrying out the invention a bracket, D, is employed, which is secured at its lower end adjustably to the head, and to the upper part of this bracket is pivoted, at its upper end, as shown at *a*, a pendent arm or guide carrier, E, adapted to vibrate upon such pivot laterally of the head B. To the lower part of the arm E is secured the thread-guide which is shown at F, a set-screw, *b*, or other means being employed for securing it in place.

G in the drawings represents a curved wire spring, the upper end of which is bent at right angles, and enters a notch, *e*, in one side of an opening, *d*, in the arm E, while the lower end of such spring is secured in a suitable manner to the lower part of the bracket D. The spring G crowds the arm E in a direction away from the head B, and the tension of the thread passing through the eye of the guide F is exerted to overcome the stress of the spring; hence the arm is always in readiness to take up the slack of the thread. The upper end of the arm E, above the pivot *a* of the latter, is formed with a right-angular head, *e*, through which, from front to rear, is inserted a screw, *f*, the inner end of which bears against the upper part of the bracket D. By means of the screw *f* the length of vibration of the arm E and thread-guide F may be varied to accommodate changes in the length of the stitch laid by the machine.

In order to be able to adjust or vary the stress of the spring G should occasion require, a series of the notches *e* are formed in the arm E, arranged in a vertical row, as shown in the drawings. By changing the head of the spring from one to the other of these notches, the leverage which the arm E and thread-guide F exert upon the thread is varied—that is to say, the tension of the take-up is thus rendered readily adjustable, the notches being at different distances from the pivotal point of said arm.

What is claimed is—

1. A bar, E, in combination with a rod, F, which is vertically adjustable therein, and provided with an eye for the wire, a bracket,

to which said bar is pivoted, and a spring, which bears against said bar to cause it to apply tension to the thread, substantially as set forth.

- 5 2. A pivoted tension-arm, provided with a series of notches at different distances from the pivotal point of said arm, in combination with a spring which engages with any one of said notches, and which may have its end or

operative part shifted from one of them to any other, for the purpose of lessening or increasing the tension, substantially as set forth.

LOUISA FOSS,

Administratrix of Geo. Fox Foss, deceased.

Witnesses:

CHARLES S. FOSS,
F. CURTIS.