

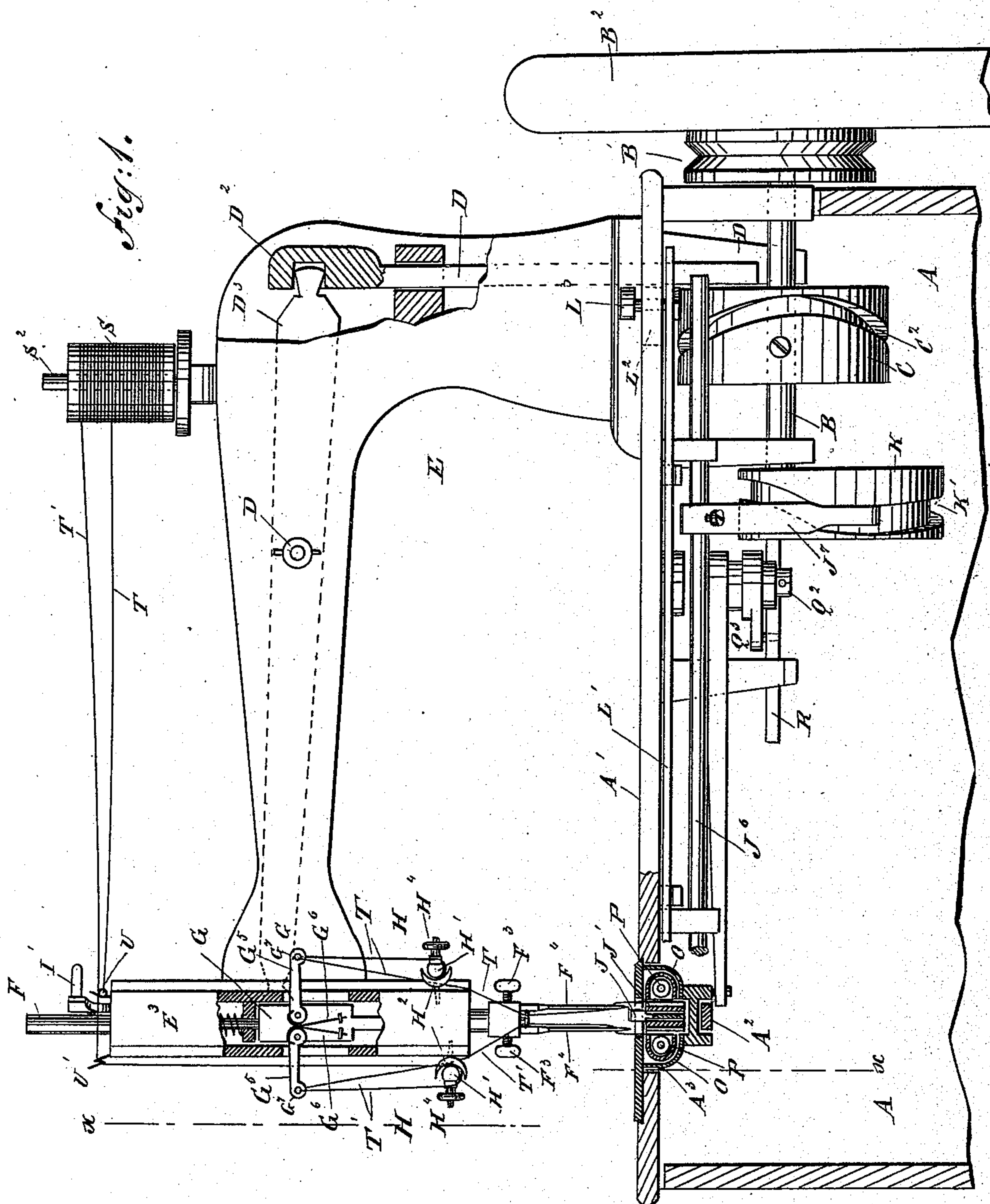
(No Model.)

2 Sheets—Sheet 1.

E. QUEROL Y DELGADO.
TAKE-UP FOR SEWING MACHINES.

No. 377,516.

Patented Feb. 7, 1888.



WITNESSES:

Unas. Vida.
C. Sedgwick.

INVENTOR:

E. Queral y Delgado
BY
Munn & Co
ATTORNEYS.

ATTORNEYS.

(No Model.)

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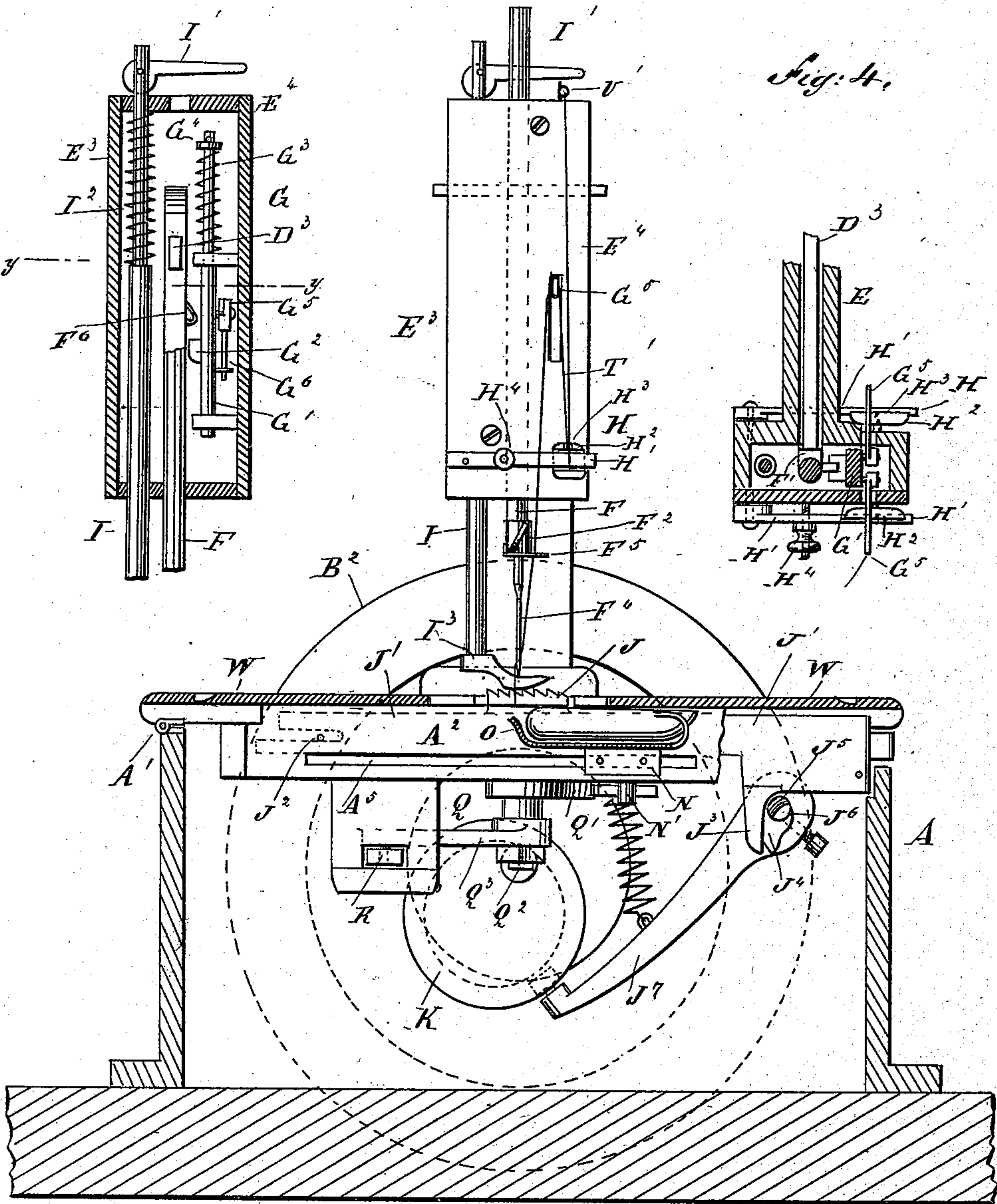
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Fig. 3.

Fig. 2.

Fig. 4.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

EMILIO QUEROL Y DELGADO, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF, JAMES WRIGHT, ELIAS DURLACH, AND MORRIS BOOKMAN, ALL OF SAME PLACE.

TAKE-UP FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 377,516, dated February 7, 1888.

Application filed December 3, 1887. Serial No. 256,885. (No model.)

To all whom it may concern:

Be it known that I, EMILIO QUEROL Y DELGADO, a subject of the King of Spain, at present residing in the city of Brooklyn, county of Kings, and State of New York, have invented new and useful Improvements in Take-Ups for Sewing-Machines, of which the following is a full, clear, and exact description.

My invention relates to a sewing-machine for which I filed application for Letters Patent of the United States under date of January 21, 1887, Serial No. 225,024.

The object of the invention is to provide a new and improved take-up which is simple and durable in construction and very effective in operation.

The invention consists in the construction and arrangement of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied to a sewing-machine, with parts in section. Fig. 2 is a sectional end elevation of the same on the line *xx* of Fig. 1. Fig. 3 is a face view of the presser-bar, the needle-bar, the take-up mechanism, and the casing in section; and Fig. 4 is a sectional plan view of the same on the line *yy* of Fig. 3.

A is the casing, provided with the hinged bed-plate A'; and B, the main shaft on the under side of the bed-plate and carrying the driving-pulley B' and the fly or hand wheel B².

C is a cam-wheel on the shaft B, with which the lower end of the bar D engages. The upper end of the bar D is provided with a socket, D², in which fits the end of the needle-bar D³, the said needle-bar being pivoted at D to the arm E. The feed-dog J is secured to the feed-bar J', pivoted at J², and provided with the lug J³, engaged by the cam J⁴ on the rod J⁶, having a beveled end, J⁵.

J' is an arm secured to the rod J⁶ and engaging the cam-groove K' of the cam K.

L' is a rod provided with a pin, L², project-

ing through a slot of the bed-plate, and provided with a button, L³, for regulating the amount of feed.

N is a cross-head supporting the shuttle-carriers O, and provided with a pin, N', which passes into the forked end of the arm Q' of the bell-crank lever Q, pivoted at Q² to the under side of the bed-plate. The other arm, Q³, of the bell-crank lever is pivotally connected to a slide-bar, R, which is to be provided with a pin for engaging the cam-groove C² of the cam C.

E³ is a head on the end of the arm E, and to the lower end of the said head are secured the tension devices H.

Each of the tension devices consists of a spring-bar, H', having a half-round end fitting in a correspondingly-shaped head, H², having a notch, H³, in its upper edge. The tension is regulated by the bolt and nut H⁴.

The head E³ is provided with a removable front plate, E⁴, and in the said head E³ is held, to slide vertically in suitable bearings, the needle-bar F, provided with a lug, F⁶, operating the take-up mechanism G. The latter consists of the vertically-sliding bar or rod G', mounted in suitable bearings in the said head E³, and having a lug, G², against which presses the lug F⁶ of the needle-bar F in its descent. The upward motion of the rod G' is caused by the spring G³, coiled on the said rod G', and resting with one end on one of the bearings, while its other end abuts against a collar, G⁴, on the upper end of the said rod G'.

On an enlarged part of the rod G' are pivoted the take-up arms G⁵, projecting sidewise but in opposite directions through slots in the ends of the head E³. The said arms G⁵ are held in a normally-horizontal position by the tension-springs G⁶, each secured by one end to the bar G', and having its other free end pressing against the pivoted end of the respective arm G⁵. Each of the latter is provided with an eye, G⁷, through which eyes pass the needle-threads T and T'.

The operation is as follows: The needle-bar F derives its vertical sliding motion from the main shaft, and in its descent presses with its lug F⁶ on the lug G² of the rod G', whereby the

take-up mechanism is carried downward with the needle-bar F, so as to permit the lower ends of the threads T and T' to follow the needles held on the needle-bar. When the latter is on its upward stroke, then the take-up mechanism G exerts a pull on the threads T and T', which are thus unwound from their respective bobbins. The lower ends of the threads T and T' are held in the cloth to be sewed, and the tension mechanisms H H, located below the take-up mechanism G, prevent a too rapid unwinding of the threads T and T' from their respective bobbins, and also prevent breakage of the threads. The springs G⁶, pressing against the take-up arms G⁵, also act as an additional tension and serve to avoid breakage of the thread in both the up and down motions of the needle-bar F.

The tension device and the feeding devices herein shown and described form no part of this application, they being made the subject of separate applications numbered 256,886 and 256,887, respectively.

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

1. The combination, with the needle-bar F, having the lug F⁶, of the upright rod G', having the lug G², against which operates the said lug F⁶, the spring G³, operating on the said rod G', the take-up arms G⁵, pivoted on the said rod G' and having on their outer ends the eyes G⁷, and the tension-springs G⁶, holding the said take-up arms in position, substantially as described.

2. The combination, with the rod G' and means for reciprocating the same, of the arms G⁵, pivoted to said rod G', and each provided with an eye in its free end, and the springs G⁶, secured to the said rod G', and having their free ends bearing upon the pivoted ends of the said arms G⁵, substantially as described.

EMILIO QUEROL Y DELGADO.

Witnesses:

EDGAR TATE,
E. M. CLARK.