(No Model.)

H. M. ESSINGTON.

TENSION RELEASING DEVICE FOR SEWING MACHINES.

No. 377,890. Patented Feb. 14, 1888.

Fig. 1.

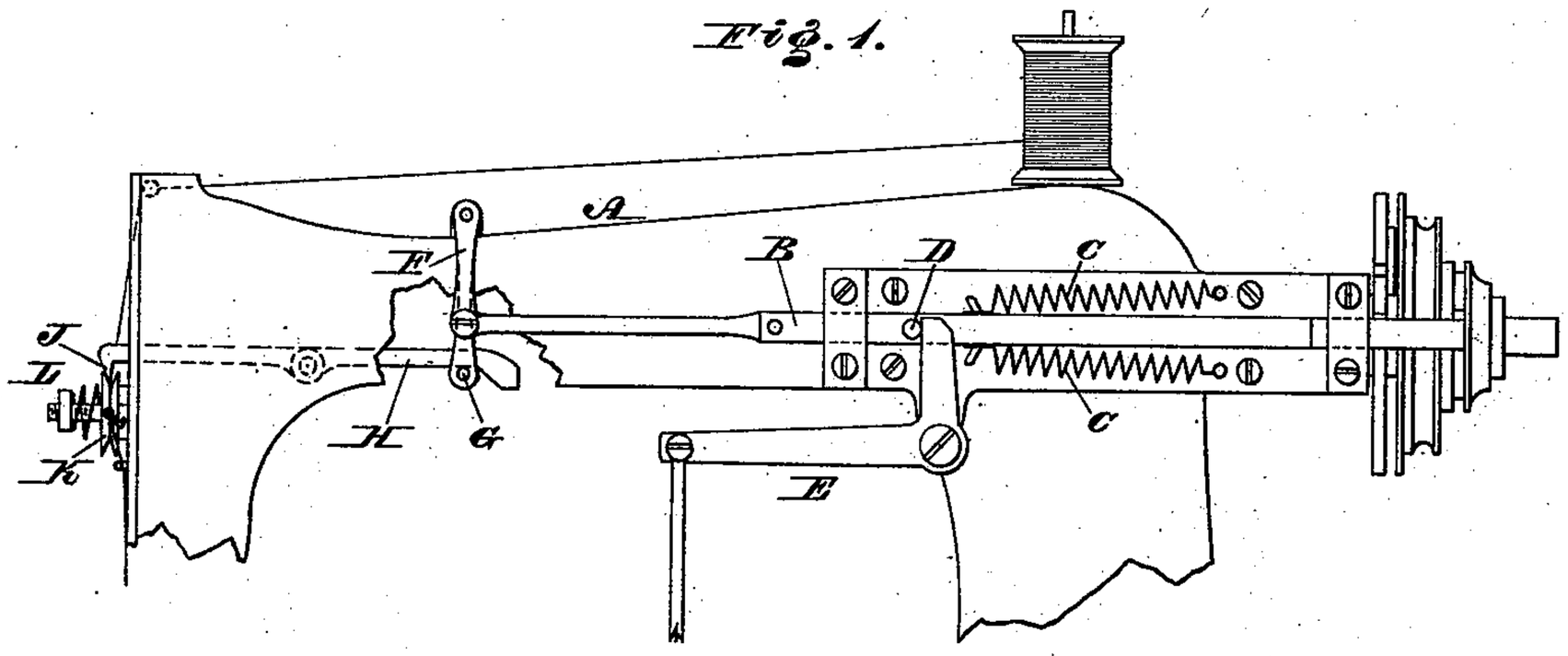


Fig. 2.

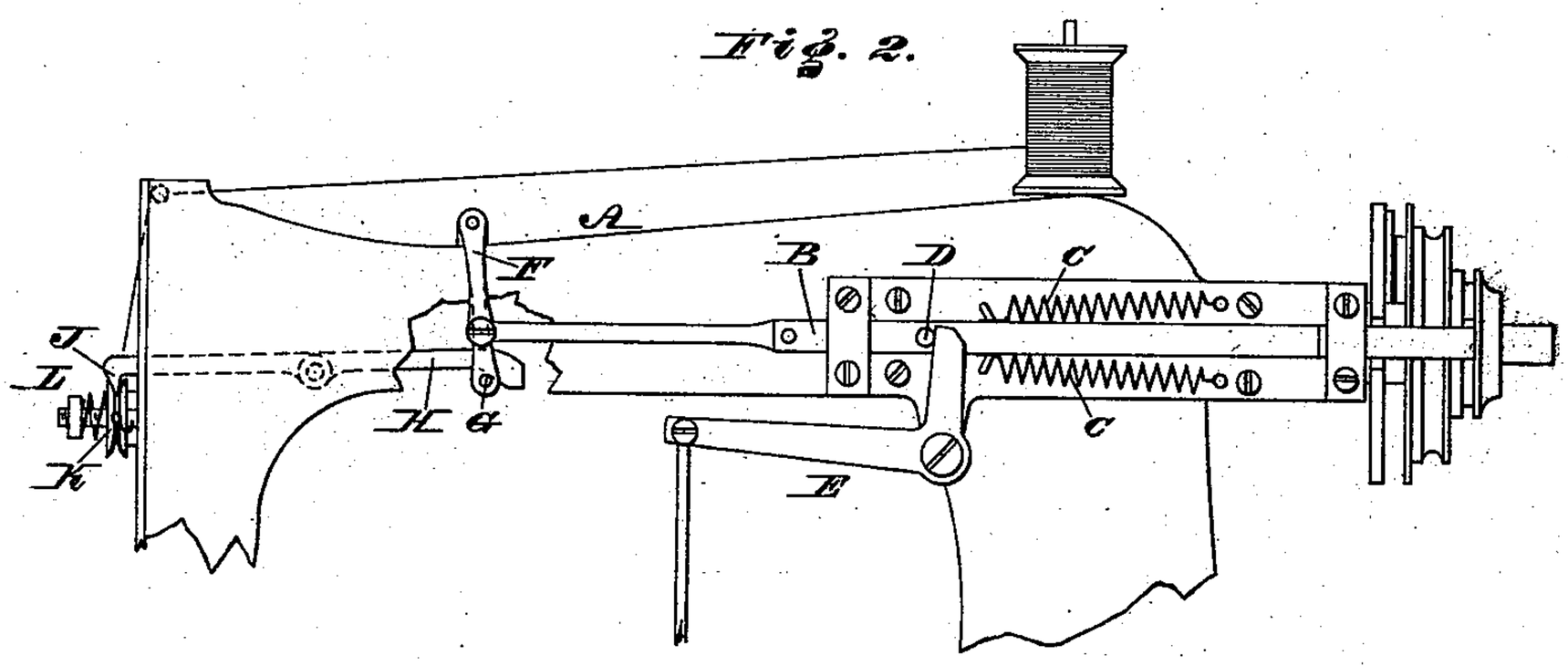
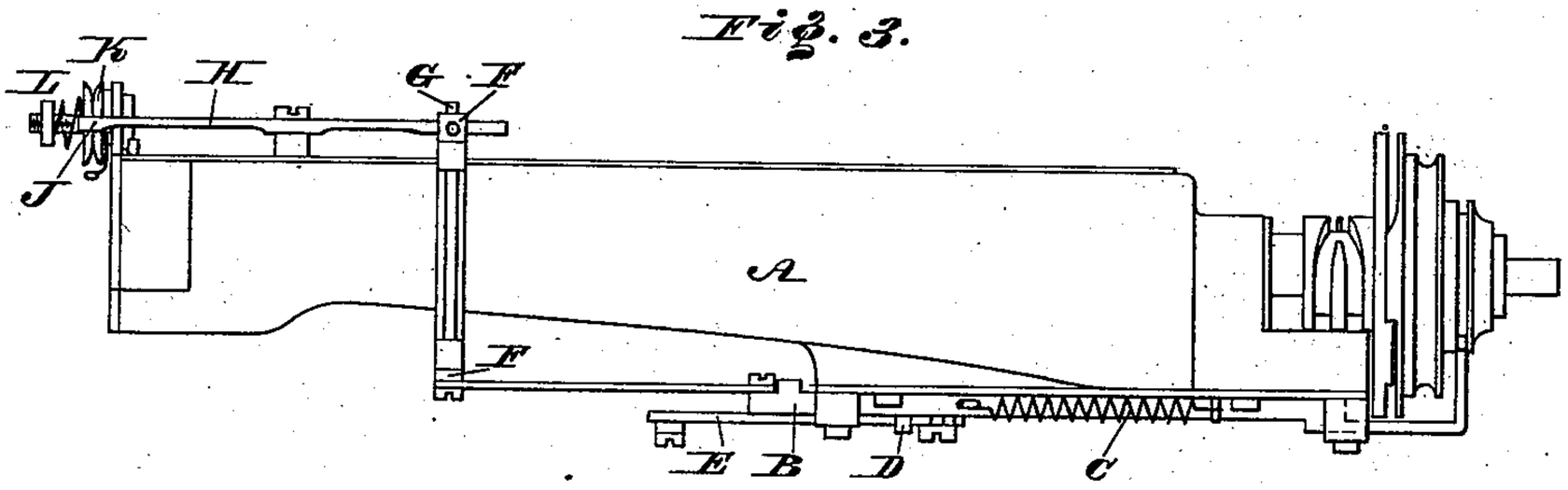


Fig. 3.



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HARRY M. ESSINGTON, OF CAMDEN, NEW JERSEY, ASSIGNOR TO THE ESSINGTON BUTTON-HOLE FINISHING MACHINE COMPANY.

TENSION-RELEASING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 377,890, dated February 14, 1888.

Application filed January 22, 1887. Serial No. 225,126. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. ESSINGTON, a citizen of the United States, residing in the city and county of Camden, State of New Jersey, have invented a new and useful Improvement in Tension-Releasing Devices for Button-Hole and other Sewing-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 represent side elevations of a tension-releasing device embodying my invention in different positions. Fig. 3 represents a top or plan view thereof.

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

My invention consists of a tension device for a button-hole or other sewing-machine which is automatically relieved when the machine stops or is stopped at a point when the needle is out of the goods.

Referring to the drawings, A represents a portion of the needle-guiding arm of a button-hole or other sewing-machine.

B represents a sliding bar which is fitted in guides on the arm A and has connected with it springs C, which are attached to said arm. Formed with or secured to the bar is a pin or stud, D, against which bears an elbow-lever, E, the latter being connected with a treadle.

It will be seen that, owing to the springs C and lever E, the bar B may be moved in opposite directions.

To one end of the bar B is pivoted a crank-arm, F, which is pivotally connected with the arm A and has its limb provided with a pin, G, which engages with the inner or heel end of a lever, H, the latter being pivoted to the arm A, and having at its forward end a nose, J, which is adapted to enter between the friction-disks K of the tension device L of the machine.

When the treadle of the machine is depressed, the bar B is advanced and the lever H is operated, whereby the disks K are relieved of the pressing action of the nose J of said lever H, the parts being in position shown in Fig. 1.

When the machine stops, the treadle being let go, the springs C become operative and cause the return of the bar B. This moves the crank-arm F, whereby the pin G raises the heel end of the lever H and causes the descent of the opposite end thereof, so that the nose or point J enters between the disks K and separates one from the other, or both from each other, whereby the tension on the thread is relieved and the thread may be readily drawn out, as desired.

When the machine is again started, the elbow-lever advances the bar B and the lever H operates to relieve the disks K of the nose thereof, whereby the tension is restored.

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

1. A tension device for a sewing-machine, consisting of friction-disks and a sliding bar with a stud thereon, and having ways secured to the needle-guiding arm A of the machine, springs secured to the bar and to the said arm A, a lever pivoted at its upper end to the arm and provided with a pin, and a second lever having a nose at one end and adapted by the operation of the said pivoted lever with the pin to separate the said disks, and means, substantially as described, for operating said sliding bar, substantially as described.

2. The combination of the elbow-lever E, connected with a treadle, with the machine-arm A and ways thereon, the bar B, sliding in said ways and having the stud D thereon, the springs C, secured to said sliding bar and to the machine-arm A, the lever F, pivoted to the machine-arm A and to the bar B, and provided with a stud, G, the pivoted lever H, having the nose J, the friction-disks K, and spring for holding the same, substantially as described.

HARRY M. ESSINGTON.

Witnesses:
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