

R. LEAVITT.

Improvement in Feeding Mechanism for Sewing Machines.

No. 123,114.

Patented Jan. 30, 1872.

Fig. 1.

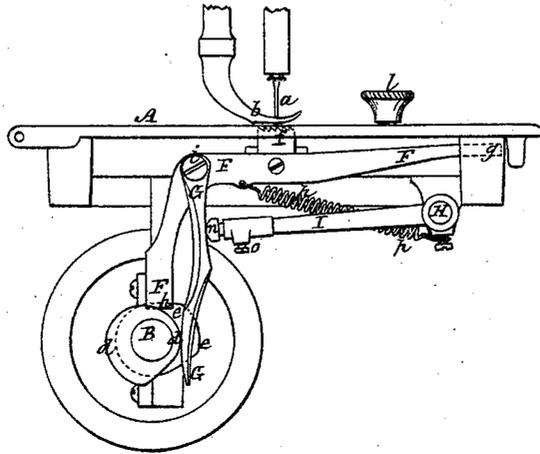


Fig. 2.

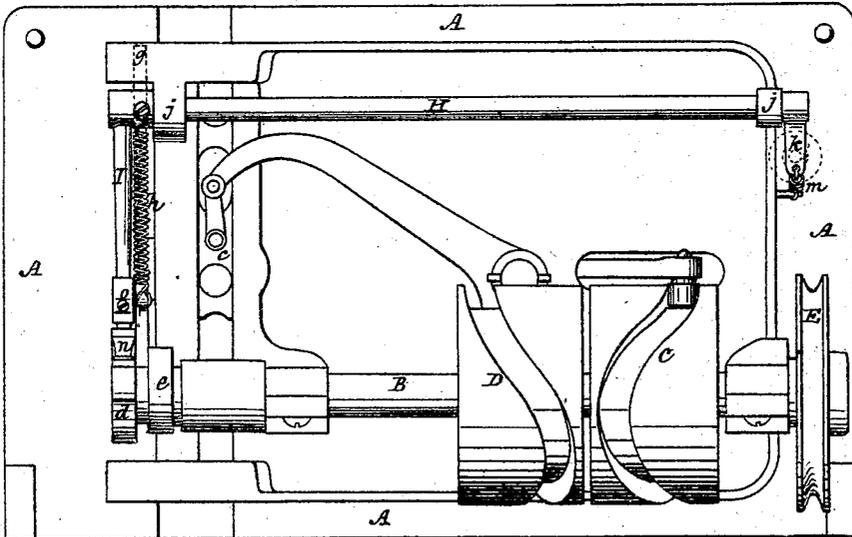
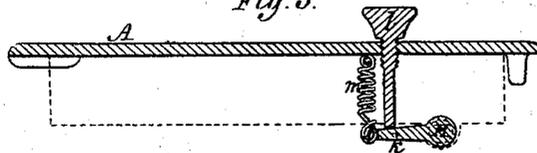


Fig. 3.



Witnesses.

Edmund Mason
Edmund Mason.

Inventor.

Rufus Leavitt
Rufus Leavitt.
By Atty. A. B. Stoughton.

UNITED STATES PATENT OFFICE.

RUFUS LEAVITT, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN FEEDING MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 123,114, dated January 30, 1872.

To all whom it may concern:

Be it known that I, RUFUS LEAVITT, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Feed-Regulating Mechanisms for Sewing-Machines; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents an end view of so much of a sewing-machine as will illustrate my invention. Fig. 2 represents the plan of the mechanism as arranged underneath the table of the machine. Fig. 3 represents a vertical transverse section through the rear of the table and through the feed-adjusting screw located thereat.

Similar letters of reference, where they occur in the separate figures, denote like parts in all of the drawings.

This invention consists in an arrangement of mechanism by which the feed of the cloth may be regulated at any time, whether the machine be in motion or not.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same by reference to the drawing.

A represents the table of the sewing-machine, over which the needle *a* and presser-foot *b* are arranged and operate in the usual well-known way. Underneath the table is the driving-shaft B, which carries the cams C D, for driving, respectively through suitable mechanism, the needle *a* and shuttle-carrier *c*, said shaft being rotated, by any power, through a belt passing over the pulley E on its rear end. Upon the front end of the shaft B are placed two cams, *d e*, for operating the cloth-moving surface *f*, as will be explained. The roughened surface or feeding-foot *f* is attached to a reciprocating and rising-and-falling bent bar F underneath the front end of the table, said foot *f* projecting up through the table in the usual well-known way. The tail end *g* of the bent bar F vibrates and is supported in a recess in or on the under side of the table, and its front downwardly-bent end *h* rides upon the cam *e* and is guided or held from lateral movement on the cam by flanges or guides thereon.

Upon or to this bent bar F there is pivoted, as at *i*, a lever, G, the lower end of which is acted upon and caused to move on its pivotal connection independently of the vibratory motion it receives from the bar F through or by means of the cam *d*; also on the driving-shaft B, as above explained. In bearings *j* underneath the table A is arranged a long rod or shaft, H, which has an arm, *k*, at its rear end, against which a thumb-nut or screw, *l*, presses, said arm being held against said screw by the action of a spring, *m*, as seen in Fig. 3 more clearly. In the front end of the rod or shaft H there is a long arm, I, which has in its free end a fulcrum-head, *n*, that may be adjusted therein by a set-screw at *o*. This head *n* of the arm I bears and is held against the lever G by the action of the spring *p* united to the shaft H and to the bent lever F, which carry, respectively, the arm I and the lever G. The horizontal reciprocating motion of the feeding-foot *f* is caused by the cam *d*, lever G, and the fulcrum *n*. The vertical reciprocating motion is given by the cam *e* through the bent bar F.

By turning the thumb-screw *l* it rocks or allows the shaft or rod H to rock in its bearings. This rocking or rolling of the shaft H causes the fulcrum-head *n* in the arm I to move up or down upon the pendent lever G, and, by changing its distance from the pivot *i*, on which the lever G moves, correspondingly changes the extent of motion it imparts to the bent bar F and to the feeding-surface on said bar; and thus the length of the feed movement may be regulated at any time, and while the machine is in motion, by simply turning the thumb-screw *l*.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent as a feed-regulating mechanism for sewing-machines, is—

The bent bar F, its pendent-lever G arranged in connection with the cams *d e* and combined with the adjustable fulcrum I having an adjustable head *n*, all combined and operating substantially as described.

RUFUS LEAVITT.

Witnesses:

ROBERT E. DEFOREST,
W. B. ROGERS.