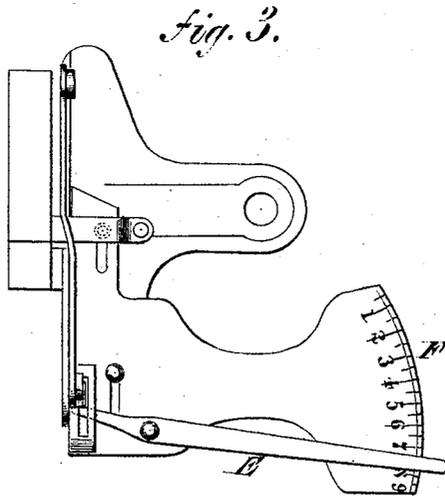
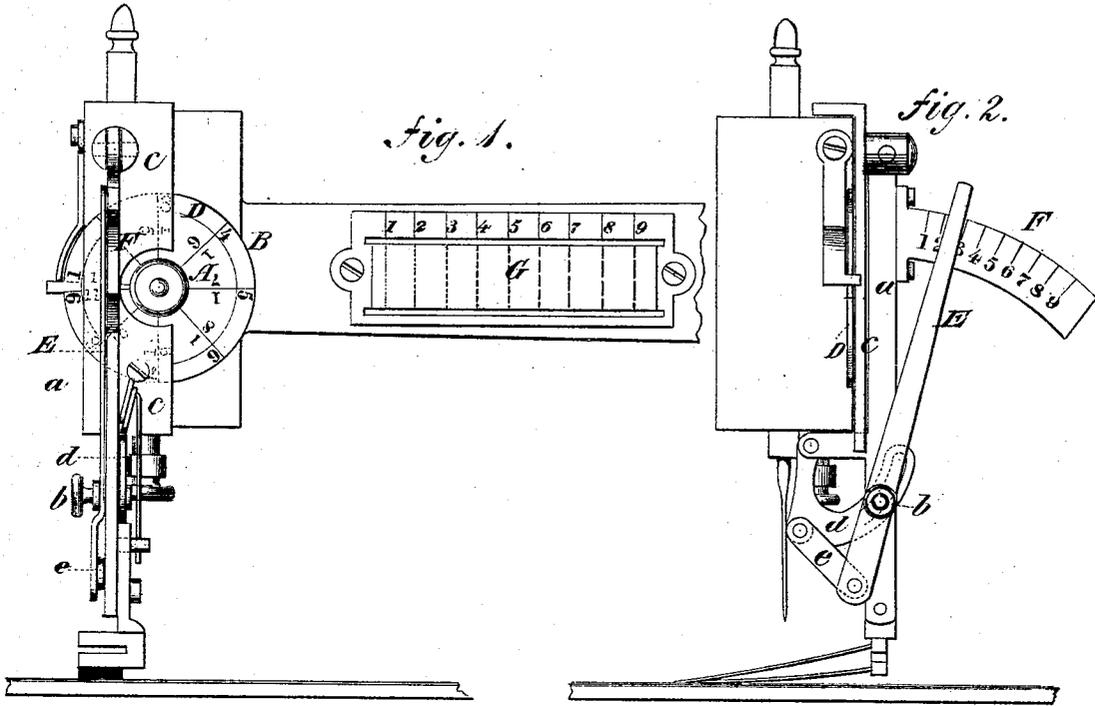


J. M. FARMER.

Stitch and Ruffing Adjusting Apparatus.

No. 149,110.

Patented March 31, 1874.



WITNESSES:

Sustave Rastwick
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INVENTOR:

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UNITED STATES PATENT OFFICE.

JULIUS M. FARMER, OF HANCOCK, WISCONSIN.

IMPROVEMENT IN STITCH AND RUFFLING ADJUSTING APPARATUS.

Specification forming part of Letters Patent No. 149,110, dated March 31, 1874; application filed January 24, 1874.

To all whom it may concern:

Be it known that I, J. M. FARMER, of Hancock, in the county of Waushara and State of Wisconsin, have invented a new and Improved Stitch and Ruffling Adjusting Apparatus for Sewing-Machines, of which the following is a specification:

My invention consists of scales, combined with the stitch-regulator and the ruffler-adjuster of a sewing-machine, so graduated relatively to each other that the operator can readily and accurately adjust the ruffler—as it may be required to be, to gather the cloth—any predetermined amount for any particular stitch; and it also consists in an adjusting-lever and connecting-link, connected with a ruffling-bar, the free or long arm of the lever moving over a graduated scale, as and for the purpose herein described.

Figure 1 is a side elevation, and Fig. 2 is a front elevation, of a part of a sewing-machine, showing a stitch-regulator and a ruffler attachment having my improvements applied.

Similar letters of reference indicate corresponding parts.

When the machine is set for long stitches it draws the cloth from the ruffler, so that it does not ruffle the cloth as much as it does when the stitches are short, and the cloth is drawn from the ruffler a little. I have prepared a scale, A, on the indicator-dial B, alongside of the stitch-scale D, showing the proportion that the cloth will be taken up or shortened by the ruffler for each stitch, and in connection with a ruffler, E, which I pivot to the ruffler-bar *a* at *b*, and connect it to the shifting-arm *d*; by the link *e*, for adjusting the ruffler. I have a graduated scale, F, dividing the range of the ruffler into degrees—say, ten.

By these means I find exactly how to set the ruffler for any particular stitch when I have a piece of cloth of any particular length which I wish to shorten to any other particular length, as follows: Suppose the stitch to be number three. It will be seen by the scale A that the ruffler will shorten the goods one-fifth for each degree that it may be set along its scale. Then I find what relation the amount I want to shorten the goods bears to one-fifth of the length of the cloth. If it is just one-fifth, I set the lever E along one degree; if two-fifths, two degrees; if a fifth and a half, a de-

gree and a half, and so on. For a number-four stitch the ruffler will shorten the cloth one-sixth; for number five, one-seventh, and so on. Thus I have no difficulty whatever in reducing a piece of cloth to any required width with great exactness.

This improvement is alike applicable to any kind of feed-regulator; also, any rufflers, of whatever form or construction, or kind of machine to which they belong. For example, the ruffler represented in Fig. 3 may have the graduated scale F for the lever E, applied to it in the manner shown, and the stitch-indicator to be used with it may have its scale A applied in any suitable way; or, in case it cannot be applied to the indicator, it may be put on any part of the machine, in connection with numbers corresponding to numbers of the stitch-indicator scale.

Another matter of great uncertainty with operators is to determine by the numbers only the stitch suitable for the case in hand, as the apparent length cannot be remembered with sufficient accuracy to know whether the stitch indicated by the number on the indicator-dial will do. I therefore propose to apply a sample-cloth, G, to the machine, in any suitable or convenient position, with rows of sample-stitches, representing the stitches made by the machine when the feed is set, according to the numbers of the stitch-indicator, one row for each number, and numbered accordingly, so that the operator has a sample ready to the eye, by which to guide when setting the feet.

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

1. The combination of the pivoted lever E and link *e*, with the arm *d* and ruffler-bar *a*, said lever extending upward and moving over the graduated adjusting-scale F, also attached to the bar *a*, all constructed and arranged to operate as and for the purpose described.

2. The combination-scale A, and indicator stitch-scale D, with the lever E, link *e*, arm *d*, ruffler-bar *a*, and scale F, all as shown and described.

JULIUS M. FARMER.

Witnesses:

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T. B. MOSHER.