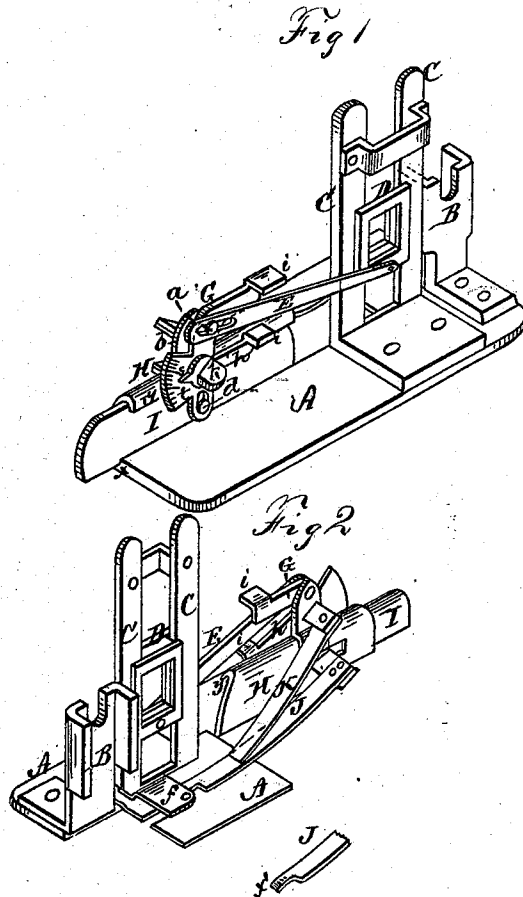


C. M. WOOLWORTH.

Ruffers for Sewing-Machines.

No. 142,543.

Patented September 2, 1873.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES M. WOOLWORTH, OF OTTUMWA, IOWA.

IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **142,543**, dated September 2, 1873; application filed June 4, 1873.

To all whom it may concern:

Be it known that I, CHARLES M. WOOLWORTH, of Ottumwa, in the county of Wapello and in the State of Iowa, have invented certain new and useful Improvements in Attachment for Sewing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a ruffling attachment for sewing-machines, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figures 1 and 2 are perspective views from opposite sides of the attachment.

A represents the bed-plate of my ruffling attachment, at the rear end of which is a flanged standard, B, to be fastened to the right side of the presser-foot bar (on a Singer machine) by means of the screw used to fasten the presser-foot. In front of the standard B, on the bed-plate A, are two parallel uprights, C C, which form guides for the perpendicular movement of a sash or gate, D, placed between and moving on them. This sash or gate is so arranged that the nut or screw of the needle-bar will work in the opening or slot of the sash, the sash or gate being connected with the ruffling-arm, so as to be operated by its up-and-down movement. In the center, at the lower end of the gate or sash D, is pivoted the rear end of a lever, E, the front end of which passes over a pin, *a*, said end being slotted longitudinally for a short distance, and the pin *a* passing through said slot. The pin *a* also serves as a pivot for an elbow-lever, G, a pivot passing through an ear, *b*, which is attached to a flange, H, turned up from the bed-plate A on a line with the standard B and guides C C. At the base of this flange is a groove, as seen at *x* in Fig. 1, and the upper edge of the flange is turned

over, as shown at *y*, thus forming guides, in which a sliding plate, I, is placed on its edge and moves back and forth. The lower end of the elbow-lever G is slotted, and a pin or screw, *d*, passes through said slot into the sliding plate I, whereby said plate obtains its movement from the perpendicularly-moving sash or gate D. J represents the ruffling-arm, the front end of which is secured to a pin or rest, *e*, that passes through a slot in the flange H into the slide I. The rear or loose end of the ruffling-arm is bent downward, and is pressed down onto the bed-plate by a spring, K, as shown in Fig. 2. The arm J has a projection, *w*, extending on one side of the needle. Over the lower or detached end of the ruffling-arm J is a plate or projection, *f*, attached to the bed-plate A, the object of which is to detain the cloth while the ruffling-arm passing under lays the plait or ruffle. On the upper arm of the elbow-lever G is a projection, *i*, and a similar projection is made on the end of an arm, *h*, fastened by means of a set-screw, *k*, to the elbow-lever. The lever E works between and against the two projections *i i* to move the ruffling-arm, and by raising or lowering the outer end of the arm *h* the length of the plait or ruffle is readily regulated. On the inner end of the arm *h* is an index-finger, *s*, pointing to a graduated dial, *t*, attached to or forming part of the elbow-lever G, for the purpose of designating the number of plaits or ruffles laid to the inch.

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

The combination, with the guides C C, of the gate D, lever E, elbow-lever G, arm *h*, slide I, ruffling-arm J, and spring K, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of May, 1873.

CHARLES MARION WOOLWORTH.

Witnesses:

C. L. EVERT,
A. N. MARR.