

C. H. PALMER.

Ruffing-Attachment for Sewing-Machines.

Patented May 11, 1875.

No. 163,239.

Fig. 1.

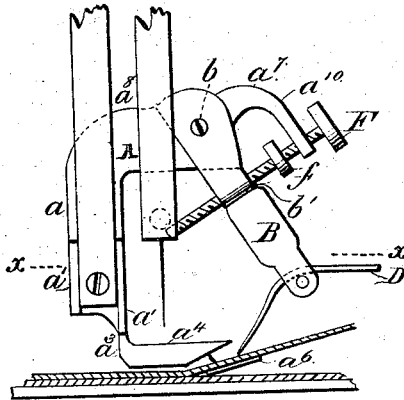


Fig. 2.

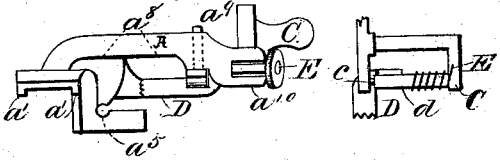


Fig. 3.

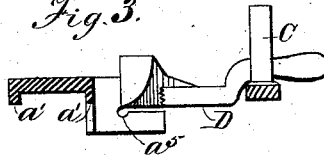


Fig. 4.

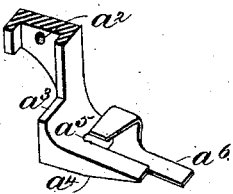


Fig. 5.

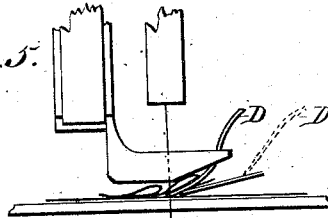


Fig. 6.



Witnesses;

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IMPROVEMENT IN RUFFLING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 163,239, dated May 11, 1875; application filed December 16, 1874.

To all whom it may concern:

Be it known that I, CHARLES H. PALMER, of the State and city of New York, have invented an Improved Crimping or Plaiting Apparatus for Attachment to Sewing-Machines, of which the following is a specification:

This invention is a ruffling attachment for sewing-machines, which is exceedingly simple in construction, and especially well adapted for the purpose for which it is designed; and it consists, mainly, in the combination of a standard of peculiar construction, adapted to be attached to the presser-bar, with a pendent pivoted lever-arm and an independent ruffling or crimping blade. It consists also in the combination of these parts with certain special means of adjustment, and in certain details of construction, all of which will be fully described hereinafter.

In the drawings, Figure 1 represents my improved attachment as applied to a sewing-machine; Fig. 2, a top view of the same removed; Fig. 3, a plan view taken on the line *x x*, Fig. 1; Fig. 4, a perspective view of the presser-foot; and Figs. 5 and 6, views representing the action of the crimping-blade upon the cloth.

To enable others skilled in the art to make and use my invention, I will now proceed to fully describe its construction and manner of operation.

A represents a C-shaped standard, constructed of any suitable size and material, which consists essentially of the main vertical portion *a*, having the flanges *a*¹ *a*¹ and opening *a*², Fig. 4, by means of which it is adapted to be readily attached to the presser-bar, the base portion *a*³, having the presser-foot *a*⁴, needle-opening *a*⁵, and L-shaped lip *a*⁶, bent into U-shaped form, as shown, and the horizontal overhanging arm *a*⁷, having the recess *a*⁸, to permit the passage of the needle-bar, the opening *a*⁹, and the slotted angular projecting plate *a*¹⁰, as shown. B represents a pendent lever-arm, pivoted at one end to the overhanging arm *a*⁷ of the standard A by means of a suitable screw inserted in its opening *b* and the opening *a*⁹ of the arm *a*⁷. *b*¹ represents a horizontal screw-threaded opening located near its center, as shown. C, Figs. 2 and 3, represents a parallelogrammic frame, secured

at one corner to the lower end of the arm B, the lower side of which consists of a shaft or pin, *c*, as shown. D represents the ruffling or crimping blade, consisting of a metallic plate of suitable form, provided near its center with a sleeve or cylinder, *d*, by means of which it is journaled upon the shaft or pin *c*, as shown. The front end of this plate, which rests upon the cloth, may be serrated or roughened, if desired, as shown, and its rear end be extended to form a handle, as shown. E represents a spring of any suitable construction, which is adapted to cause the ruffling-blade to press down upon the cloth firmly in its forward movement, for the purpose of carrying it forward, and yet yield readily in its backward movement. F represents a screw adapted to turn in the opening *b*¹ of the arm B, which is provided with a threaded stop-ring, *f*, as shown. The parts, when united together, occupy the relative position shown in Fig. 1.

The operation is as follows: The attachment having been properly secured to the presser-bar, and the cloth properly arranged with the base or foundation piece beneath the presser-foot and the lip *a*⁶, and the piece to be ruffled in the slot of the U-shaped lip *a*⁶, and lying upon the base portion of the lip beneath the ruffling-blade, the machine may be set in operation. The ascent and descent of the needle-bar will communicate to the crimping-blade a reciprocating movement, by means of which the cloth will be properly gathered and sewed, in the usual well-known manner.

The rearward movement of the crimping-blade is caused by the contact of the end of the needle-bar or its needle-screw in its descent with the lower end of the adjusting-screw F, and the forward movement of the blade by the contact of the screw in its ascent with the short arm of lever B, as indicated in Fig. 1.

By means of the adjusting-screw F the length of the backward movement of the crimping-blade may be determined, and consequently also the width of the gather. This result is accomplished in the following manner: The stop-ring *f* is located upon the screw F in such position that when it is pressed back against the arm *a*¹⁰, with the crimping-blade in position to make the narrowest gather, just

room enough will be left at the lower end of the screw to permit the needle-arm to pass. If it is desired to increase the length of the gather the screw F is moved forward so that its lower end is caused to project farther beyond the line of movement of the screw of the needle-arm than before, and hence, when the needle-bar descends, it will be moved a greater distance in a rearward direction, by which means an increased amount of cloth is taken by the crimping-blade.

Some of the advantages of the described construction are as follows: The parts are few in number, simple in construction, and compactly arranged, so that the device produced can be furnished at a small cost, is not liable to get out of order, and occupies but little space. The means for adjustment are exceedingly simple and reliable.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the standard A, lever B, and adjusting-screw F, the parts being relatively arranged as described, whereby the needle-bar in its ascent and descent alternately comes in contact with the lever and adjusting-screw, for the purpose of giving proper movement to the crimping-blade, substantially as described.

2. The crimping-blade, provided with an extension adapted to serve as a handle, substantially as described.

3. The combination of the standard A, having arm *a*¹⁰, lever B, with the adjusting-screw F and stop-ring *f*, as described.

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Witnesses:

GEO. M. RAMSAY,

WALTER W. MONTAGUE.