

(Model.)

H. C. GOODRICH.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 296,740.

Patented Apr. 15, 1884.

Fig. 6



Fig. 7

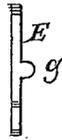


Fig. 1

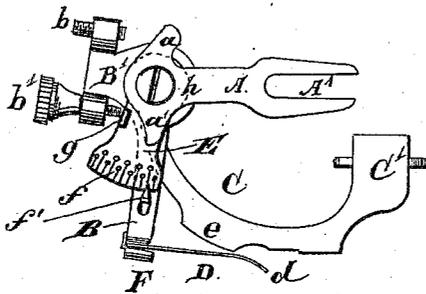


Fig. 4

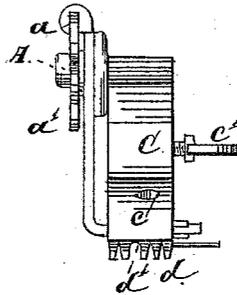


Fig. 2

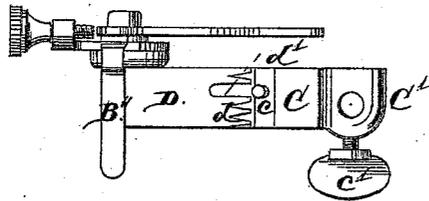


Fig. 5

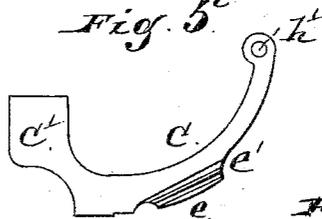


Fig. 3

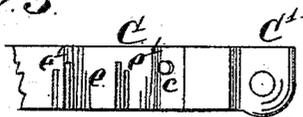


Fig. 8

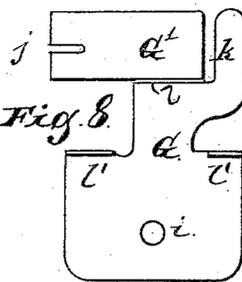


Fig. 9



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HARRY C. GOODRICH, OF CHICAGO, ILLINOIS.

RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 296,740, dated April 15, 1884.

Application filed August 11, 1883. (Model.)

To all whom it may concern:

Be it known that I, HARRY C. GOODRICH, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Ruffling Attachments for Sewing-Machines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, a bottom view; Fig. 3, a bottom view of the frame, partly broken away; Fig. 4, an end elevation; Fig. 5, a side elevation of the frame with the other devices removed, showing the opposite side to that shown in Fig. 1; Figs. 6 and 7, a side and edge view, respectively, of the gage; Figs. 8 and 9, a bottom and an edge view, respectively, of the separator.

The objects of this invention are to simplify the construction and improve the operation of ruffling attachments for sewing-machines by employing in the construction of such devices a supporting frame or standard, a swinging arm carrying the ruffling-blade, and an actuating-arm by which, through the reciprocating movement of the needle-bar, the arm carrying the ruffling-blade is oscillated, the actuating-arm and the arm carrying the ruffling-blade having a common pivotal point, thereby reducing the amount of friction and rendering the device easier in operation, with less wear on the parts; and its nature consists in providing an actuating-arm having at its acting end, on opposite sides, lips or projections to engage with set-screws or other bearing-points carried by the arm which supports the ruffling-blade to oscillate such arm, and combined with a supporting frame or standard, all as hereinafter more specifically described, and pointed out in the claim.

In the drawings, A represents the actuating-arm, having at one end a slot, A', by means of which a connection is made with the needle-bar of a sewing-machine by engagement with the set-screw for the needle, or otherwise, and having at its opposite end lips or projections a a', located on opposite sides of the body of the arm, as shown in Fig. 1, one of which, a, has an inclined engaging-face, and the other a curved engaging-face, which faces, however, may be otherwise formed.

B is an arm having at its upper end an extension, B', provided with screw-threaded ears or sockets—one on each side of the projection B'—to receive, respectively, set-screws b b', and so arranged as to present the ends of the set-screws, when projected in line with the respective ears a a', to be engaged by such ears.

C is a frame or standard, curved as shown in Fig. 5, or in some other suitable manner, and having at one end a head or socket, C', in which is an opening of suitable dimensions and shape to receive the end of the presser-bar of the sewing-machine, to which the head or socket C' is securely clamped by a thumb or set screw, c'. The body of the frame or support C is provided at the proper point with an opening, c, for the passage of the needle. The under face of the body or main portion of the frame C has a portion, e, in the edge of which are formed slots e', through which the edges of a folded ribbon or strip of cloth or other material are passed, to be stitched to the piece acted on, for the purpose of forming a welt at a seam.

D is a ruffling-blade, made of a piece of sheet-steel or other suitable material, and having at its acting end teeth d to engage the material, and a slot or opening, d', for the passage of a needle, as usual, and attached by riveting or otherwise to a side extension, B'', on the lower end of the arm B, as shown in Fig. 2, so that the oscillations of the arm will move the blade forward and back, and the distance traveled by the blade in its forward and back movements is regulated by the set-screws b b', which can be made to project to a greater or less extent, as required, for the desired throw of the blade.

E is a gage located on the pivot for the arms A B, and between such arms, and having on its lower or free end gage-marks f, by means of which the desired width of ruffle can be determined, a pointer, f', being attached to the arm B below the edge of E, in line with which the marks on E for the desired width of tuck are brought, setting the arm B to give the blade D the required amount of throw. This gage E on one edge has an outwardly-turned lip or projection, g, to engage the end of the screw b' and set the gage E at the mark required for the width of ruf-

fle, and be engaged by the projection *a'* and move the arm B back, the forward movement being made by engagement of the projection *a* with the end of the screw *b*. When the gage is not used, the projection *a'* engages directly with the end of the screw *b'* to carry the blade back, and when it is not desired to be very precise as to the width of ruffle the gage E can be dispensed with and the device operated in a successful manner.

F is a guide slipped onto the extension B'' of the arm B, to guide and hold the material operated on in its passage beneath the ruffling-blade.

G is a separator formed of a piece of sheet metal, having an opening, *i*, for the passage of a set-screw, by which it is attached to the bed-plate of a sewing-machine, and having its acting end G' provided with a slot, *j*, which, when the separator is in place, comes in line with the slot *l'* in the blade D for the passage of the needle, the opposite end of the acting portion having a lip, *k*, which is struck up so as to leave an opening between its under face and the face of the end G' for the passage of the material acted on, the lip or tongue *k* forming the means for keeping the material down to place. The form of this separator is shown in Figs. 8 and 9, and, as shown, the separator on its main or body portion is provided with an edge or ledge, *l*, to form a guide for the edge of the material and keep it in a straight line of travel when the separator is used in connection with the ruffling devices.

The arm A is pivotally connected with the standard or frame C by a pin or screw, *h*, the stem of which passes through an opening in the end of the arm A, and enters an opening, *h'*, in the end of the frame or support C, and the stem of this pin or screw *h* also forms the pivot on which the arm B oscillates, the stem passing through a suitable opening in the upper end of the arm, and when the gage E is used it is hung or suspended from this same pin or pivot *h*, the stem of which passes through a suitable opening in the upper end of the gage, by which construction it will be seen that the parts are all connected together by a single screw or pin, and this same screw or pin also forms the pivot on which the arms

In operation, the frame or support C is attached to the presser-bar of the machine by the head or socket C', and takes the place of the ordinary presser-foot, and the arm A is connected by the slot A' with the needle-bar, when the device is ready for use. The ascent of the needle-bar raises the forward end of the arm A and causes the projection *a* to engage with the end of the screw *b*, and the descent of the needle-bar depresses the arm A and causes the projection *a'* to engage with the end of the screw *b'*, producing a forward-and-back movement of the ruffling-blade through the vibration of the arm B from the engagement of the projections *a a'* with the ends of the screws *b b'* when the gage is not used, and when the gage is used the engagement of the projection *a'* is made with the lip *g*, producing the same result. When the gage is used, the width of the plait or ruffle is determined by the point at which the gage-marks *f* on the plate E are set. When the gage is not used, this width is determined by adjusting the set-screw *b'* to have its end engaged by the projection to produce the required size of ruffle.

By using a separator made independent of the ruffling devices it will be seen that a piece of material of any width can be ruffled, as there is a clear space between the blade and the separator for the passage of the material.

The body of the separator is to be formed to adapt it to be attached to the bed-plate of a sewing-machine and bring the acting portion G' beneath the ruffling-blade and over the feed-dog, and will vary from that shown in order to suit different styles of machines, and, as shown, lips *l'* are struck down from the body or main portion to enter the slot between the throat-plate and bed-plate and form a lock to hold the separator firmly in position.

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

An arm, H, having its acting end provided with projections *a a'*, in combination with an arm, B, carrying a ruffling-blade and having adjusting devices, gage E, and frame or support C, substantially as described.

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Witnesses:

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