(No Model.)

T. B. GARRETSON.

RUFFLING AND SHIRRING ATTACHMENT FOR SEWING MACHINES.

No. 263,332. Patented Aug. 29, 1882.

Fig. 1.

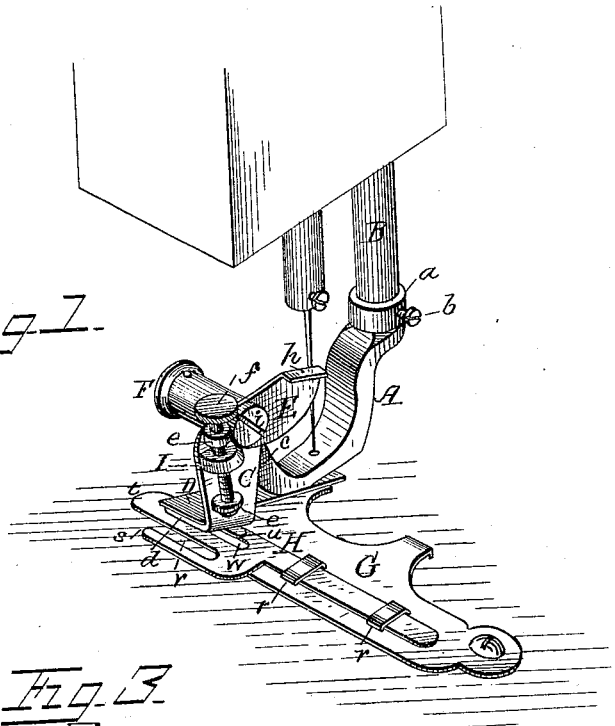


Fig. 3.

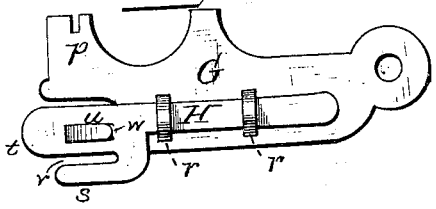


Fig. 2.

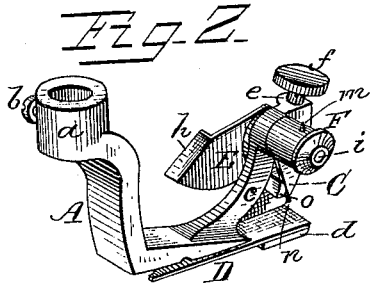


Fig. 4.

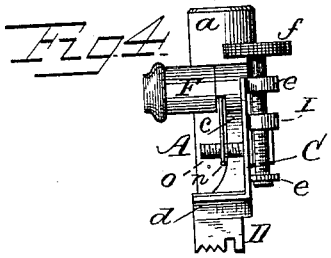
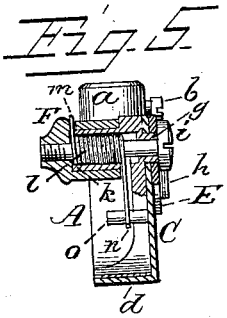


Fig. 5.



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UNITED STATES PATENT OFFICE.

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RUFFLING AND SHIRRING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 263,332, dated August 29, 1882.

Application filed May 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. GARRETSON, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Ruffling and Shirring Attachments for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my invention, showing the presser-foot connected to the presser-bar of a sewing-machine; Fig. 2, a detached view, in perspective, of the presser-foot; Fig. 3, a top plan view of the separator-plate; Fig. 4, an end view of the presser-foot; and Fig. 5, a similar view, partly in section.

The present invention has relation to certain new and useful improvements in ruffling and shirring attachments for sewing-machines; and it consists in the details of construction substantially as shown in the drawings, hereinafter described and claimed.

In the accompanying drawings, A represents the presser-foot, formed at its upper end with an eye or collar, *a*, for connecting it to the presser arm or bar B of the sewing-machine by set-screw *b*; or any other suitable means may be employed for detachably securing the presser-foot to the bar B.

To one side of the presser-foot A, or to the extension *c* thereof, is pivoted the blade-carrier C, its lower or free end having lateral projection *d*, for securing thereto the ruffling-blade D, of steel, its forward end being slotted to admit of the passage of the needle. The ruffling-edge of the blade D may be either plain or corrugated, and, if desired, the entire carrier C and blade D may be formed from a single piece of steel. The carrier C is formed with or has bearings *e*, for supporting a gage-screw, *f*, swiveled therein, and upon which travels a screw-threaded block, I, when the screw is turned for the purpose of regulating the stroke of carrier, hereinafter more fully described. The pivoted plate E, which rests against the block I, has a lateral extension, *h*, to receive the downward stroke of the needle-bar, said extension being provided with a steel bearing to prevent wear; or, if preferred, the entire plate E, with its extension *h*, may be formed from a single piece of steel. Both the carrier C and plate E are fitted over a short sleeve, *g*, through which passes a pin, *i*, provided at one end with a suitable head and at the opposite end with screw-threads for connecting thereto the cap F. This screw-threaded pin *i* holds the carrier and plate upon the sleeve *g*, and extends into and through a tube, *k*, projecting horizontally from the side of the plate E, as shown in Fig. 5, the pin being of sufficient length to pass beyond the tube for attaching the cap F, which incloses said tube. This tube *k* has an opening or slot running lengthwise thereof, to admit the arm *n* of a coiled spring, *l*, so that the spring can be inserted or withdrawn from the tube when required.

The cap F, which encircles the tube *k*, is removable therefrom and from the screw-threaded end of the pin *i*, its inner end abutting against a shoulder formed at the base of the tube. The spring *l* is coiled around the pin *i*, one of the ends or arms, as shown at *m*, passing up through a hole in the cap F, while the other end or arm, *n*, projecting from the inner portion of said spring, passes down and presses against a bearing-pin, *o*, upon the carrier C.

The separator-plate G is designed to be secured by means of a gage-screw to the bed-plate of a sewing-machine, and has an extension, *p*, clamps *r*, for holding adjustable gage H, said gage having arms *s t u*, and slots or spaces *v w*.

The operation of my invention is as follows: The attachment being secured to the presser-bar of a sewing-machine, as shown in Fig. 1, and the separator-plate secured by gage-screw to the bed-plate of the machine, the fabric to be ruffled or shirred is placed between the blade D and separator-plate G, and if to be gathered near the edge placed between the guide-arms *t* and *u* of the gage H. If a band is required, pass the fabric through opening *v* and under the separator-plate at *p*, next the feed. On the descent of the needle-bar the

needle clamp or screw strikes the plate E at *h*, forcing it, in connection with the carrier C, rearward. On the needle-bar being raised the carrier C is forced forward, carrying the blade D under the presser-foot A by means of the arm *n* of the spring *l*, the blade thus engaging the goods forming the ruffle and carrying it forward beyond the needle, where it is held by the needle while the blade is again withdrawn.

To make shirring, the separator-plate may be dispensed with; or the fabric may be passed between the blade D and separator-plate. The plate being disconnected from the ruffler proper enables the operator to form the ruffle any distance from the edge of the goods, which is indispensable in shirring where a separator-plate is used. The fullness of the ruffle is regulated by means of the screw *f* in connection with the block I, which, being threaded, is made to pass up or down upon the screw *f* by turning the latter in the proper direction, the nut or block I pressing firmly against the carrier C, and also against the rear part of the plate E, thus changing the position of said plate in reference to the carrier.

The tension of spring *l* may be increased by loosening the screw-threaded pin *i* and turning the cap F to the right, and securing it in position by tightening the pin.

The gage H being adjustable laterally, it thus forms a guide by which the goods may be delivered to the needle, so that the seam may be made the desired distance from the edge in either direction without changing the position of the separator-plate G, which is designed to cover a portion of the feed-points.

It will be observed that in my device for ruffling and shirring the ruffle is formed and carried forward by the action of the coiled spring, having a tension-regulating device, and not by any power transmitted by or from the needle-bar to the blade by means of levers or other devices, as it will be seen that the attachment is entirely disconnected from the needle-bar when the ruffle is formed.

It will also be observed that the ruffler-blade is straight, and is carried at such an angle with relation to the goods as to obviate the necessity of having turned or bent points.

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

1. The combination, with a suitable ruffling-blade and carrier of a ruffling device, of a presser-foot having extension-arm *c*, tube *k*, and the screw-threaded pin *i*, cap F, and coiled spring *l*, substantially as and for the purpose set forth.

2. In a ruffling and shirring device for sewing-machines, the presser-foot thereof having extension-arm *c*, to which is pivoted the plate E, in combination with the screw *f*, carrying adjusting-block I, substantially as and for the purpose specified.

3. In a ruffling device for sewing-machines, the combination, with the extension-arm *c* of the presser-foot, having tube *k*, screw-threaded pin *i*, spring *l*, and cap F, of the carrier C, with blade D, arranged and carried at such an angle with reference to the goods as to obviate the necessity of having turned or bent points to engage the same, substantially as and for the purpose set forth.

4. The presser-foot A, formed with or having tube *k* and sleeve *g*, in combination with the blade-carrier C and plate E, and the screw-threaded pin *i*, cap F, and coiled spring *l*, substantially as and for the purpose specified.

5. The presser-foot A, having the extension-arm *c* and tube *k*, and the cap F and spring *l*, with arm *n*, in combination with the carrier C, having bearing-pin *o* and adjusting-screw *f*, carrying block I, and plate E, constructed to operate substantially as and for the purpose set forth.

6. In a ruffling device, the combination, with the separator-plate G, of the adjustable gage H, having extension arms or guides *u s t*, substantially as and for the purpose set forth.

7. The presser-foot A, having extension-arm *c* and tube *k*, the pin *i*, spring *l*, cap F, and the carrier C, and plate E, constructed to operate as set forth, in combination with the separator-plate G and adjustable gage H, of the form substantially as shown, and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS B. GARRETSON.

Witnesses:
THOMAS TERRELL,
GEO. T. SUTTON.