

J. M. GRIEST.

• Ruffing and Gathering Attachment for Sewing Machines.

No. 159,261.

Patented Feb. 2, 1875.

Fig. 1

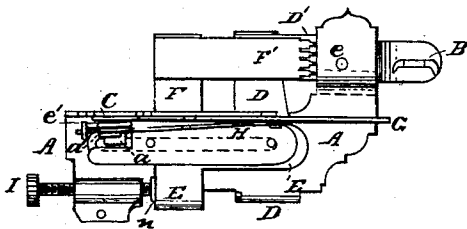


Fig. 2

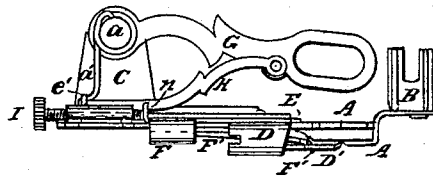


Fig. 3

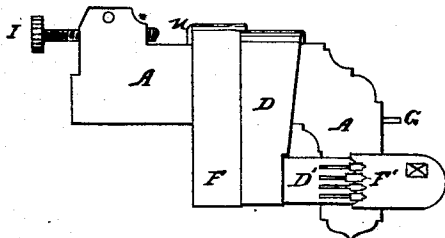


Fig. 4

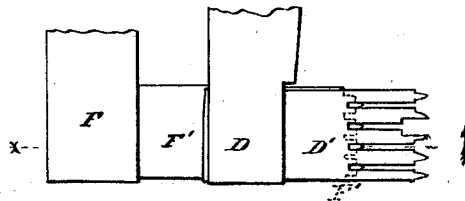
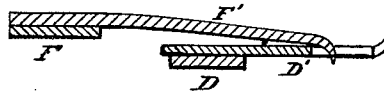


Fig. 5



WITNESSES.

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# UNITED STATES PATENT OFFICE.

JOHN M. GRIEST, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN RUFFLING AND GATHERING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **159,261**, dated February 2, 1875; application filed November 16, 1874.

*To all whom it may concern:*

Be it known that I, JOHN M. GRIEST, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ruffling and Gathering Attachments for Sewing-Machines, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part hereof, and in which—

Figure 1 is a top or plan view of a ruffling and gathering attachment embodying my invention; Fig. 2, a side elevation thereof; Fig. 3, a bottom view of the same; Fig. 4, a like view of a part thereof, detached; and Fig. 5, a longitudinal vertical section through the latter parts.

Like letters of reference indicate like parts.

In the drawing, A represents the base-plate of the attachment, the form of which plate is plainly shown. B is a presser-foot attached to the plate A. C is a vertical piece projecting from the base-plate, and *a* is a pin extending from one side of the piece C. *e* is a hole to receive the needle. D is an arm rigidly attached to the base-plate, and D' is a shield rigidly attached to the arm D. The arm D extends across the under side of the base-plate, and a considerable space exists between these parts. The shield is attached to the end of the arm D and projects forward toward the presser-foot, which lies in the same horizontal plane with it, as shown. The shield is made of spring metal, and is toothed and notched in the manner shown. It is also arranged to lie over the feed-points, so as to keep the latter from contact with the teeth of the ruffling-blade, as will hereinafter more fully appear. Shallow grooves may be sunken into the upper face of the shield for the purpose of receiving the teeth of the ruffling-blade, thus allowing them to enter the cloth without striking the feed-points. E is a sliding piece on the base-plate, and *n* is a stop on the piece E. F is an arm carried by the piece E, and extending across the bottom of the base-plate. F' is the ruffling-blade. This blade is carried by the arm F and lies above the shield. The ruffler is toothed and notched in the manner shown. The teeth of the shield

are turned upward, and are arranged to enter the notches in the ruffler. Instead of these notches in the shield shallow grooves may be sunken into its lower face to receive the teeth of the shield. The teeth of the ruffler extend downward, and are arranged to enter the notches or grooves in the shield. The ruffler is made, preferably, of spring metal. G is an arm or lever mounted freely on the pin *a*, and having its forward end slotted, as shown. *a'* is a spring attached to the pin *a* and to the piece E. *e'* is a slotted vertical lug on the piece E. H is a connecting-arm pivoted to the lever G, and passing freely through the slot or opening in the lug *e'*. The rear end of the arm H is bent to strike the lug *e'* during the upward movement of the arm G. The spring *a'* carries the piece E rearward during downward movement of the said arm. I is a thumb-screw or gage to limit the rearward movement of the piece E.

In order to use this attachment it is applied to the presser-foot bar in the usual way, and the cloth is arranged between the shield and the ruffling-blade. The arm G is actuated by the needle bar or arm, the upward stroke of which causes the ruffling-blade to move forward. The teeth of the ruffling-blade are carried forward of the teeth of the shield, the latter teeth then entering the notches or grooves in the ruffler, and a fold or plait is thus made in the cloth, the latter being held by the presser-foot in the usual manner. The teeth of the ruffling-blade, owing to the deep notches or grooves in the shield, come in contact with nothing except the cloth, and they engage it with certainty during each forward movement. The spring *a'*, during the downward stroke of the needle-bar or arm, returns the ruffler for another fold, and while the cloth is being gathered in this manner it is also fed along and stitched in the usual way. The teeth of the ruffler ride over the cloth during the backward stroke, and the teeth of the shield keep the cloth from being drawn back by the ruffler. The screw I may be so set that the arm H may have a greater or less degree of lost motion before striking the lug *e'*.

It will be perceived from the foregoing description that the gathers or folds are thus made to lie so that they are inclined upward

and from the point toward which the cloth is fed, and are thus made to pass smoothly beneath the presser-foot. It will also be perceived that the gathering-blade need not be notched to receive the needle, but may cover the hole *e* entirely during the latter part of the forward stroke.

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

1. A sewing-machine ruffler or gatherer wherein the free end of a flexible and sliding ruffling-blade is toothed and supported on a notched or grooved fixed part arranged for contact with that part of the cloth operated upon by the said blade, the said grooves or notches being arranged to receive the said teeth, and being deep enough to keep their points from contact with the fixed part, for the

purpose of thereby allowing the teeth to project through the cloth, substantially as specified.

2. The ruffling-blade *F'*, having the downwardly-bent teeth in its free and yielding edge, and also the notches sunken therein rearwardly from the base of the said teeth, in combination with the fixed shield *D'* arranged below the said shield, and having therein the upwardly-turned teeth arranged to enter the notches in the shield, and also having the deep notches arranged to receive the teeth of the ruffling-blade, all substantially as and for the purposes specified.

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Witnesses:

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