

E. J. TOOF.

Ruffler.

No. 126,913.

Patented May 21, 1872.

Fig. 1.

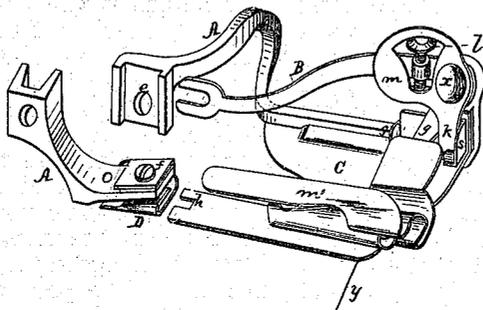
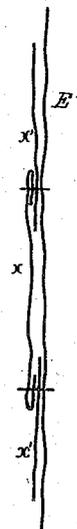
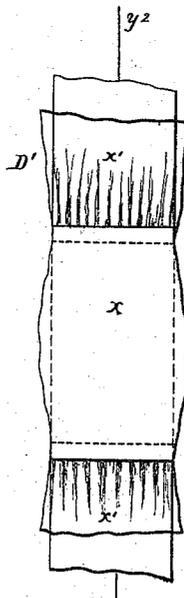
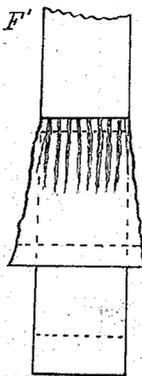
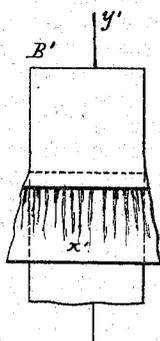


Fig. 2.



Witnesses.

Wm. W. S. Dyer.  
James S. Johnston.

Inventor.

Edwin J. Toof

# UNITED STATES PATENT OFFICE.

EDWIN J. TOOF, OF FORT MADISON, IOWA.

## IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 126,913, dated May 21, 1872.

To all whom it may concern:

Be it known that I, EDWIN J. TOOF, of Fort Madison, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Ruffling Attachments for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in providing the feed-plate of a ruffling attachment (such as is described in Letters Patent granted to me October 24, 1871, No. 120,173) with a guide for the piece of goods to be ruffled, and sewed between an upper and lower piece of goods, said feed-plate and guide to be combined with a presser-foot provided with a folding-in or hemming device.

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

In the accompanying drawing, which forms part of my specification, Figure 1 is a perspective view of a ruffling attachment, the feed-plate of which is provided with a guide. Fig. 2 is a transverse section of the feed-plate and guide at line *y* of Fig. 1.

The figure marked B' represents a piece of goods turned over upon another piece which is ruffled and sewed in between the upper and lower portions of the turned-over piece, the portion turned over being hemmed at the same time. C' is a section of B' at line *y*<sup>1</sup>. The figure marked D' represents a piece of goods ruffled and sewed between an upper and lower piece, the upper piece being hemmed at the same operation. E' is a section at line *y*<sup>2</sup> of D'.

In Fig. 1 of the accompanying drawing, A represents a bent arm provided with an opening, *e*, for the screw used for securing it to the presser-bar of the sewing-machine. B is a bent lever pivoted to the arm A at *x*, the front end of which is forked so as to straddle the screw which secures the needle in position. The lever B is provided with an adjusting-screw, *l*, for varying the position of the limb *k* of the piece *m*, with relation to the downward-projecting limb *g* of the lever B. The piece *m* is pivoted with the lever B to the bent arm A, as indicated at *x*. On the arm A is

placed a feed-plate, C, which is provided with lugs *s*, against which the limb *k* of the piece *m*, and the limb *g* of the lever B, alternately strike at each up-and-down movement of the lever B, thereby imparting to the feed-plate C a reciprocating motion. *h* is an orifice in the feed-plate C for the needle. The feed-plate C is provided with a guide, *m'*, which is fitted to a folding-in or hemming device on the plate; but it may be otherwise secured to the plate. The manner of securing the guide to the plate I leave to the good judgment and skill of the mechanic. The presser-foot A' is provided with a folding-in or hemming device, D, which is constructed of sheet metal, and secured to it by means of screw *f* or by other suitable means.

When the ruffling attachment, constructed as hereinbefore described, is attached to the presser-bar of the sewing-machine, the bed-plate of the machine will be unincumbered, whereby the skirt of a lady's dress may be trimmed with a series of hemmed ruffles, and attached to it at different distances from its edge.

The operation is as follows: The upper piece of goods *x* is placed in the folding-in or hemming device D, and the piece *x'*, to be ruffled, is placed in the guide *m*, as indicated by the dotted line in Fig. 2, and passed between the feed-plate C, and the under side of the folding-in or hemming device D on the presser-foot. The under piece of goods is placed between the feed-plate C and the bed-plate of the sewing-machine, and the needle passing down carries the lever B with it, the limb *k* of the piece *m* strikes against the back lug *s* of the feed-plate C, carrying it backward, leaving a space between the feed-plate and the needle. Then, as the needle rises, the lever B is carried upward, causing the limb *g* to strike against the forward lug *s*, which will move the feed-plate C forward, and it presses the piece of goods *x'* against the under side of the folding-in or hemming device D, carrying the piece of goods *x'* with it, folding it over ready for the needle in its next downward motion to pass through the upper piece *x*, the fold and the under piece of goods, (which is carried forward by the feed of the machine,) and thus ruffle, hem, and sew the three pieces of goods to-

gether, as shown in the figures marked D' and E'. By removing the guide *m*, and using the folding-in device which holds it, a piece of goods may be ruffled, hemmed, and sewed to another piece of goods, as shown in the figure marked F.

Having thus described my improvement in attachment for sewing-machines, what I claim as of my invention is—

The feed-plate of the ruffling device provided with a guide, and used in combination with a presser-foot furnished with a folding-in device, substantially as herein described, and for the purpose set forth.

EDWIN J. TOOF.

Witnesses:

WM. W. S. DYRE,  
EDM. F. BROWN.