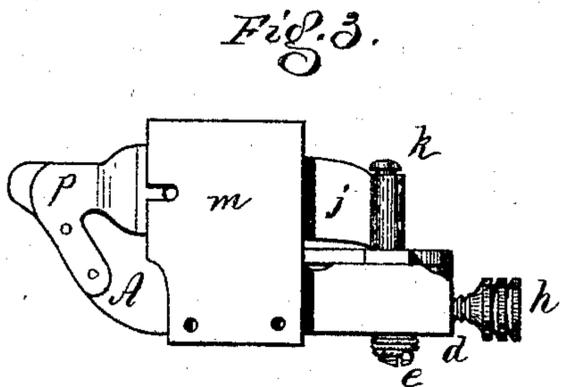
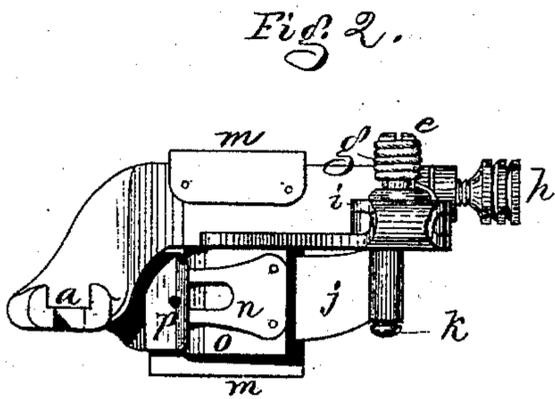
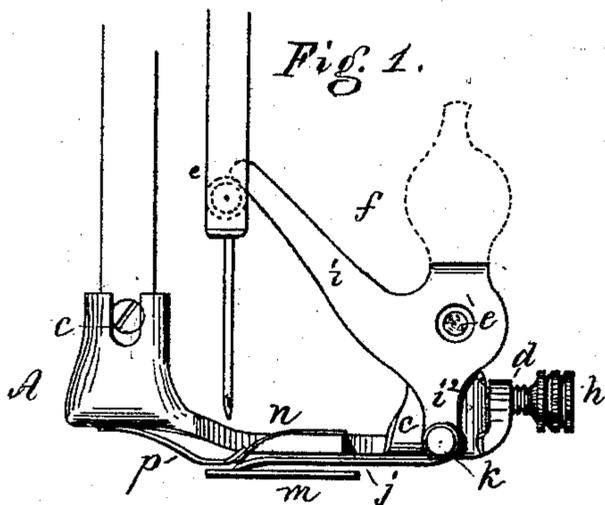


J. BOLTON.

RUFFLER FOR SEWING-MACHINES.

No. 171,263.

Patented Dec. 21, 1875.



Witnesses

L. H. Cratimer.

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per Lewis Gregory  
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# UNITED STATES PATENT OFFICE.

JAMES BOLTON, OF CHICAGO, ILL., ASSIGNOR TO SINGER MANUFACTURING COMPANY, OF NEW YORK, N. Y.

## IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **171,263**, dated December 21, 1875; application filed September 11, 1875.

To all whom it may concern:

Be it known that I, JAMES BOLTON, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Rufflers for Sewing-Machines, of which the following is a specification:

This invention relates to improvements in rufflers for use on sewing-machines, and the form shown in this instance of my invention is adapted to the Singer machine; and my invention consists in the construction and combination of the parts, as hereinafter described, and specified in the claims.

Figure 1 represents my improved ruffler in side view. Fig. 2 is a top view, and Fig. 3 an under-side view, thereof.

A represents the frame of the attachment provided with a recess, *a*, to receive the presser-bar *b*, it being attached thereto by a screw passing through a slot and into a threaded hole in the presser-bar. This frame A at its forward end has a standard, *c*, and a threaded lug, *d*, provided with a thread-hole, the former to receive and form a bearing for the journal *e* of the elbow or three-armed lever *f*, the arm being connected rigidly with the journal, which turns in the bearing *c*, but being under the control of a spring, *g*, connected therewith and with the lug *d*, so that the tendency of the spring is to turn the journal, so as to keep the long arm of the lever in its lowest position, and its lower end with its connected ruffler drawn back from the needle-hole or sewing-point. A screw, *h*, in lug *d* meets the end of arm *i* of the lever *f*, and controls the extent of backward movement of the ruffling-blade *j*, connected with a pin, *k*, of lever *f*, and consequently the size of the gather. The lever *f* has three arms, *i*<sup>1</sup> *i*<sup>2</sup>. Arm *i*<sup>1</sup> projects toward the needle-bar, to be struck by the needle confining or adjusting screw *l*. *i*<sup>2</sup> is connected with the ruffling-blade, and *i* is bent from the position shown in dotted lines, Fig. 1, over the standard *c*, (see Fig. 2,) the journal *e* passing through the hole in the bent-over arm *i*, and the lower end of the arm is arranged to meet the adjusting-screw *h*, as before described. This construction prevents any lateral movement of the lever. The forward end of the ruffling-blade *j* is bent down-

ward, to engage the cloth to be ruffled lying on a separating-plate, *m*, which separates the piece to be ruffled from the piece to which it is to be attached, in the usual manner. The separating-plate *m* is connected at one end (see Fig. 2) with the frame A by rivets or screws, and between the frame and the separator I may use a movable guide, to guide the edge of the strip to be ruffled. This separator is notched to extend beyond the stitching-point, and its forward edge prevents the return of the fold carried forward by the end of the blade *j*. The forward end of the blade is preferably serrated, to assist it to engage and carry the material forward for a fold or ruffle; but it is not notched to permit the passage of the needle through the fold formed by the blade, for the blade does not hold the fold until the needle penetrates it, but, on the contrary, the blade under the action of the spring *g* retreats from the sewing-point and the path of the needle as the latter commences to descend. The blade is moved forward positively to make a fold or ruffle as the needle-bar completes its upward movement and before the point of the needle enters the material. On the downstroke of the needle-bar the blade, through the action of the spring *g*, is retracted far enough to be out of the way of the needle. A forked piece, *n*, secured to a projection, *o*, of the frame A extends under the toe of an elastic presser, *p*, attached to the frame, and provided with a needle-hole. The fold or plait is pushed under the forward end of the presser, and the forked piece *n* acts to retain the fold, and prevents its displacement by the backward movement of the blade.

The frame A might be shaped so as to be applied to the cloth-plate of a sewing-machine. The needle-bar nut or a projection from the needle-bar bears against the face *r* of the arm *i*<sup>1</sup> of the lever *f*, and the arm is held against the nut or projection by the action of the spring *g*.

I claim—

1. The combination, in a ruffler, of the standard, the three-armed lever embracing the standard, and the ruffling-blade and its retracting-spring, with the presser, the forked holding-piece *n*, and its supporting projection, the sep-

arator, and an adjusting device, all substantially as described.

2. The combination of the lever, its attached ruffling-blade, and a separator, with a spring to retract the blade as the needle-bar descends, the lever being adapted to be operated positively to form a fold in the material to be ruffled as the needle-bar is completing its up-stroke, substantially as described.

3. The frame A, adapted to be secured to the presser-bar and the presser *p*, in combination with the separator, the lever adapted to be operated by the needle-bar, and the spring to retract the blade, all substantially as described.

4. The presser, the lever *f*, and its attached ruffling-blade, in combination with a spring to retract the blade as the needle descends, and a screw to regulate the descent of the arm *i*<sup>1</sup> of the lever, and the movement backward of the blade with reference to the point of the needle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES BOLTON.

Witnesses:

H. McCALL, Jr.,  
WM. W. SQUIRE.