

J. McCULLOUGH.

Rufflers.

No. 158,428.

Patented Jan: 5, 1875.

Fig. 1.

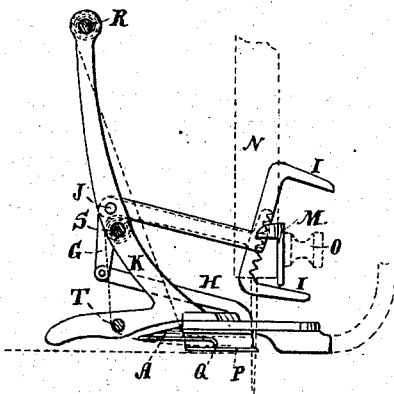


Fig. 2.

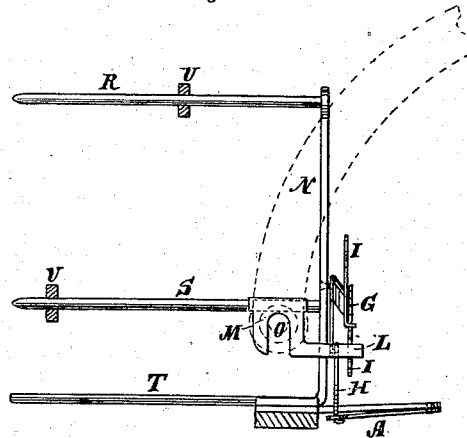


Fig. 3.

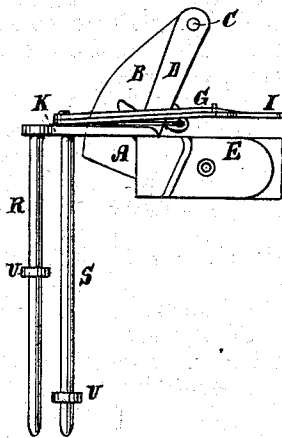


Fig. 4.



Fig. 5.

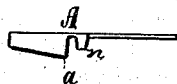
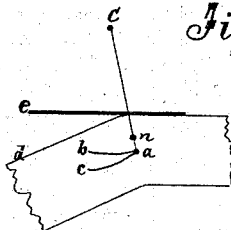


Fig. 6.



WITNESSES:

A. Demme & Co.
Chicago

INVENTOR:

BY

J. McCullough
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES McCULLOUGH, OF ASPINWALL, NEBRASKA.

IMPROVEMENT IN RUFFLERS.

Specification forming part of Letters Patent No. **158,428**, dated January 5, 1875; application filed July 25, 1874.

To all whom it may concern:

Be it known that I, JAMES McCULLOUGH, of Aspinwall, in the county of Nemaha and State of Nebraska, have invented a new and Improved Ruffler, of which the following is a specification:

The essential feature of this invention consists of the ruffling pawl or plate, mounted so as to work on a pivot, and connected to the bell-crank, by which it is worked in such manner that the friction due to sliding in ways is avoided, and it is so actuated that in pushing the cloth forward it presses harder as the resistance increases, and in drawing back it rises off the cloth and moves back easily; and it also acts as a guide to control the cloth and prevent the ruffle from working laterally out of the ruffler, all as herein-after described.

Figure 1 is a side elevation of my improved ruffler. Fig. 2 is a plan view. Fig. 3 is a section, and Figs. 4 and 5 are details, of the ruffling pawl or plate; and Fig. 6 is a diagram, illustrating the action of the ruffling-plate.

Similar letters of reference indicate corresponding parts.

A is the pawl or plate for ruffling the cloth. It has a long lateral curved arm, B, by which it is pivoted at C to the stationary arm D, which is attached to the presser E. An arm, F, parallel with, and a little longer than, A, extends from arm B, and this arm is connected with the elbow-lever G through the connecting-arm H.

The elbow-lever, which is made of two parts, forming adjustable branches I for varying the movement of the ruffler, is pivoted at J to the upright bar K, and is worked by the projection L of a little notched plate, M, which is secured to the needle-arm N by the nut for fastening the needle.

The ruffling-plate A, which works above the little plate P, which separates the strip to be ruffled from the cloth in the usual way, is bent down at the end which operates on the cloth, as shown at Q, and it is so adjusted that only a small portion of the depressed end at the corner *a* bears on the plate.

The object of this arrangement is to make

the ruffler guide the cloth, and prevent it from working out sidewise by the side draft or resistance very common in ruffling by the drag of a greater quantity of material on one side than on the other.

The effect of the arrangement is a tendency of the point to embed itself in a crease, *b*, in the cloth as it slides back over it, and at the same time, by the curved motion, to swing the edge *d* of the ruffle around on the point *n* to the line *e*, where it should run in case it should get out of line, as indicated in Fig. 6.

It will be seen that by the arrangement of the push-pawl above and behind the ruffler, and by the connection of it to the point of arm F, the forward motion of the pawl presses the ruffler down on the cloth, and the backward motion lifts it so that it presses on the cloth at the right time, and lifts off entirely free when going back, by which the best results are obtained in ruffling the cloth, and the loss of power due to drawing the ruffler back under pressure on the cloth, and the use of a spring to lift it off, are avoided.

It will also be seen that, by arranging the ruffler on the pivot C, the slides commonly used, and the friction common to the working of the ruffler in them, are avoided.

The rods R and S are employed to hold the band and the cloth to be ruffled in rolls to feed therefrom, so as to require less attention by the operator, and the rod T is to smooth out the cloth as it passes under the ruffler.

The rolls of cloth will be held on the rods by friction-washers U.

The upright K, for supporting the rolls of cloth, is attached to the presser.

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

The combination, with the presser-foot having the cloth-supporting spindle and the separator-plate P, of the pivoted supporting-plate A, having depressed point *a*, and the connecting-arm H and elbow-lever, all constructed, arranged, and operating as set forth.

JAMES McCULLOUGH.

Witnesses:

J. W. MARGRAVE,
JESSE SHORTLIDGE.