B. POULSON.

Ruffler for Sewing-Machines.

No. 197,402. Patented Nov. 20, 1877.

Fig 1

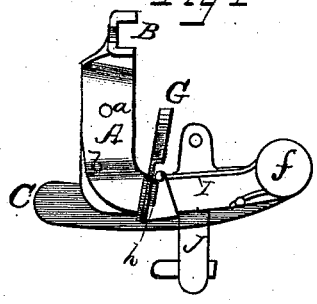


Fig 2

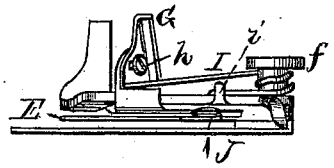


Fig 4

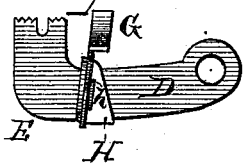


Fig 3

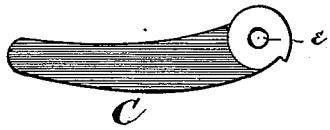


Fig 5

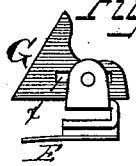
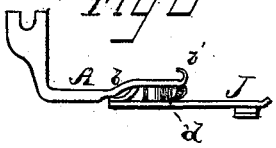


Fig 6



Witnesses

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UNITED STATES PATENT OFFICE.

BRITTON POULSON, OF FORT WAYNE, INDIANA.

IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **197,402**, dated November 20, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that I, BRITTON POULSON, of Fort Wayne, in the State of Indiana, have invented certain new and useful Improvements in Rufflers for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, referenec being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification

The nature of my invention consists in the construction and arrangement of a ruffler for sewing-machines, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 a front view, of my improved ruffler; Figs. 3, 4, 5, and 6 are detailed views of parts thereof.

A represents an L-shaped foot, provided at its rear end with a suitable socket or projection, B, to be fastened on the presser-foot bar of the sewing-machine, in place of the ordinary presser-foot. *a* is the needle-hole in the foot for the passage of the needle. The front portion of the foot A is elevated, as shown, by having a bend in the foot in front of the needle-hole, as shown at *b*.

At the outer end, on the under side of the foot A, is a hollow downwardly-projecting hub, *d*, through which, from underneath, is passed a screw, *e*, that projects upward from the end of a thin flexible arm, C, and held by a thumb-nut, *f*, screwed upon the end of the screw *e* above the foot. On the hub *d*, between the foot A and blade C, is placed one end of a rigid arm, D, having the ruffling-blade E secured to it, said blade having a slotted and toothed extension, which lies under the inner portion of the foot, with the teeth on both sides of the needle-hole.

The arm D is provided with a hook-shaped projection, H, which extends over the top of the foot A, and has the gage G secured to it. This gage is formed with an inclined face or flange, against which the screw of the needle-bar strikes. The gage has a slot, *x*, through which passes a screw, *h*, to fasten the gage to the projection H, and by means of the slot the gage can be adjusted backward and forward, as desired. Around the screw *f* is placed a coiled-wire spring, I, one end of which bears against the projection H, and the other end against a lug, *i*, on the foot A.

This ruffler being made fast to the presser-foot bar, and the machine started, the needle-screw strikes the gage G, when this will move back toward the operator, carrying the ruffling-blade E with it as the needle-bar goes down. When the needle-bar goes up, the spring I will throw the cam or gage back, carrying the ruffling-blade E with it. Then it is that the ruffling-blade catches the goods and moves it up, or makes the ruffle.

To put the goods in for a ruffle on a single piece, the goods are placed on top of the smooth or long blade C, and under the ruffling-blade E, when the foot is lowered and the machine started.

To ruffle and sew on at the same time, one piece is placed under the smooth blade C, and the piece to be ruffled is put in the same, as before. If a ruffle is desired between two plain pieces, one piece is placed under the smooth blade C, one piece between said blade and the ruffling-blade, and the third piece on top of the said ruffling-blade.

The width of the ruffle can be regulated by moving the gage J, which is pivoted to a projection on the foot, either to the right or left. This gage consists of an arm with a hook-shaped guide on its under side, and is intended to keep the goods from running too far to the right and left, and to show the operator where to run the goods.

If it is desired to make a ruffle in the center of a very wide piece, loosen the thumb-screw *f*, and turn the smooth blade C one-fourth of a revolution forward, and then tighten the screw again; then place both the pieces under the ruffler, and with the left hand hold back a little on the bottom piece. If only one piece is used no holding back is required.

To make fine or coarse ruffling, loosen the screw *h* and move the gage G back or forward, and then fasten it again. In all cases the goods must pass under the heel of the ruffler.

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

1. The combination of the foot A, with needle-hole *a*, the pivoted arm D, carrying the ruffling-blade E, and the spring I, substantially as and for the purposes herein set forth.

2. The adjustable cam or gage G, attached to the projection H on the arm D, in combination with the ruffling-blade, foot, and spring, substantially as and for the purposes herein set forth.

3. The combination of the foot A, the pivoted arm D, with ruffling-blade E, and the flexible movable blade C, substantially as and for the purposes herein set forth.

4. The pivoted gage J, in combination with the foot A and ruffling-blade E, for the purposes herein set forth.

5. The combination of the foot A, with needle-hole *a*, pivoted arm D, with projection H and ruffling-blade E, the adjustable cam or gage G, spring I, smooth blade C, and gage J, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BRITTON POULSON.

Witnesses:

SAMUEL L. MORRIS,

ROBERT STRATTON.