Ruffler. 1. A sewing-machine attachment for forming ruffles in goods. That illustrated at A, Fig. 4493, is Toof's, particularly designed for the Singer machine, but its mode of attachment may be varied to suit other machines.

The arm a is connected by a screw at b to the presser-foot bar of the sewing-machine, and to it is connected by a rivet e the lever d, which is forked at e to receive b, the nut securing the needle, from which this derives motion.

The lever d carries a set-screw c' for adjusting the amount of movement given to the feed-plate f at each reciprocation of the needle, which passes through a slot at the rear of the feed-plate.

The goods are placed between the feed-plate and the presser-foot of the machine, and as the needle passes upward and downward, carrying the long arm of the lever d with it, the arm g of the index device A reciprocates the feed-plate to an amount previously regulated by the adjustment of the screw c'. At each forward movement the feed-plate acts on the presser-arm, carrying forward and folding the cloth, which is penetrated by the needle as the latter descends and causes the backward movement of the feed-plate.

In the Johnston ruffler (B, Fig. 4493), a sliding-plate a is secured to the bed-plate b of the machine by rivets or screws passing through slots in the plate, so as to permit the necessary motion. The plate a is reciprocated by the forked lever c operated from the needle-bar. The movement of the plate a and the depth of the gather or ruffling are regulated by a bent lever d pivoted on the sliding-plate. One arm of this lever passes under a slotted piece e attached to the sliding-plate, and the other has a projection at its end for holding it in either of a series of notches f. The cloth is held between a spring g attached to an arm h on the bed-plate, and a spring i connected by an arm to the sliding-plate, which is reciprocated at each movement of the needle to a distance determined by the previous adjustment of the lever d.