

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 *c* the lever *d*, which is forked at *e* to receive the nut securing the needle, from which nut it derives motion.

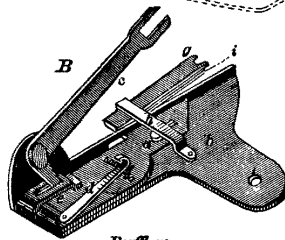
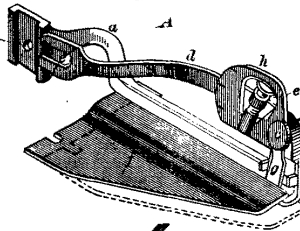
The lever *d* carries a set-screw *e'* for adjusting the amount of movement given to the feed-plate *f* at each reciprocation of the needle, which passes through a slot at the rear of the feed-plate.

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 *h* reciprocates the feed-plate to an amount previously regulated by the ad-

justment of the screw *e'*; 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*.

Fig. 4493.



Rufflers.