

W. H. LEWITT.

Rufflers for Sewing-Machines.

No. 154,497.

Patented Aug. 25, 1874.

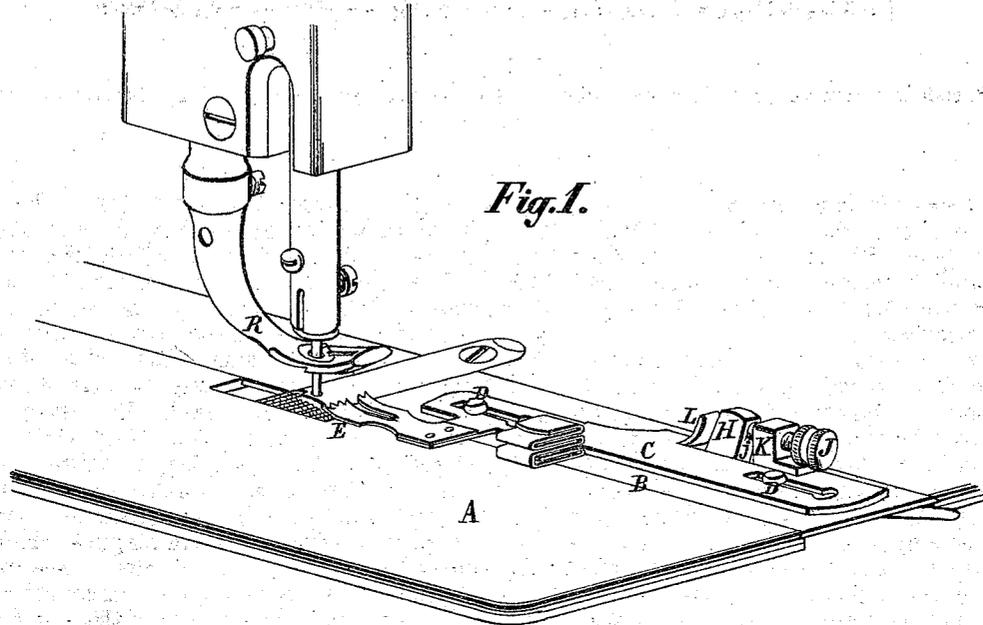


Fig. 1.

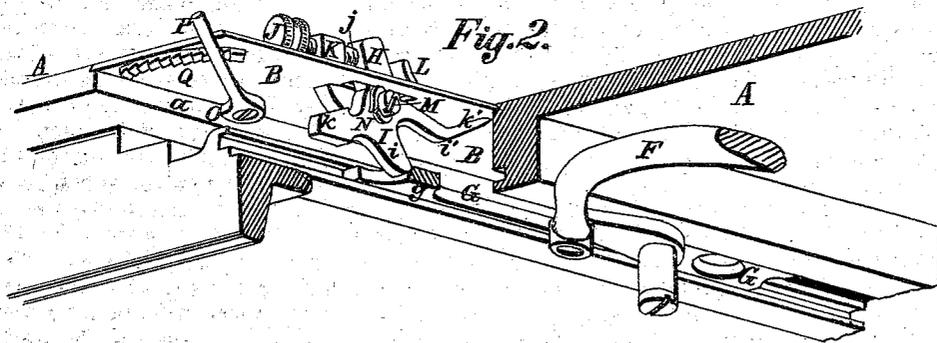


Fig. 2.

ATTEST:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. LEWITT, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 154,497, dated August 25, 1874; application filed December 18, 1873.

*To all whom it may concern:*

Be it known that I, WILLIAM H. LEWITT, of St. Louis, St. Louis county, Missouri, have invented a certain Improvement in Rufflers for Sewing-Machines, of which the following is a specification:

This invention is an improvement on my patent No. 140,285, dated June 24, 1873; and consists in constructing the lever, which is actuated by the shuttle-driver slide with projections at its lower part to receive a positive movement in both directions, and also to serve as stops, and providing the ruffler slide-plate with a temper-screw, through which the lever acts upon the ruffler-plate with an effect variable by the adjustment of said screw.

In the drawings, Figure 1 is a top perspective view; and Fig. 2 is a bottom perspective view, with parts of the cloth-plate broken away.

A is the cloth-plate; B, the front shuttle-race cover; C, the sliding ruffler-plate with guide screws or studs, D, and carrying a gatherer, E. G is the shuttle-driver slide, and F the arm by which it is operated.

All the above parts have a similar construction to those in the aforesaid patent, No. 140,285, and as used by the Howe sewing-machine.

The lever H in the present improvement has a shoe, I, provided with two projections, *i i'*, against which the bar *g* of the shuttle-driver slide acts to vibrate the lever H. The ends *k k'* act as stops to limit the vibration of the lever H by impact against the bottom of the cloth-plate A. The end *k* also acts as a weight tending to hold the top of the lever H against the rounded point of the temper-screw J by pressure, against which the slide C is moved backward from the needle. The screw J turns in a stud, K, fixed on the top of the plate C. The slide-plate C is moved in the opposite direction—that is, forward—by a projection, L, against which the upper end of the lever H impinges.

The travel of the slide-plate C is regulated by the temper-screw, for, as the impingement of the lever against the point of the screw

causes the backward movement of the slide, if the screw is turned backward so as to lessen the projection of its point *j* from the stud K, it is evident that the slide would not be carried so far backward and the travel of the slide would be decreased. On the other hand, if the screw J is turned forward so that its point projects farther from the stud the travel of the slide C is increased. The lever oscillates on a fulcrum-screw, M, on which is a washer, N, whose periphery is formed into a number of springs by angular slits extending inward from the edge, and then in a circumferential direction, forming tongues, which are curved to one side, so as to have a bearing on the side of the lever H, and check its movement, except by the action of the bar *g* upon its projections *i i'*. On the under side of the plate B is a cam, O, whose lever P moves against the ratchet Q on the under side of the plate B. The purpose of this cam is to hold the plate B in place by pressure against the side of the opening *a* of the cloth-plate, in which the plate B rests. The turning of the cam-lever P to the left brings the salient portion of the cam with force against the side of *a*, and the cam is held in this position by the hold of the ratchet Q upon the lever. The pressure-foot R has a ratchet-tooth on its lower side to prevent the material from being drawn back by the retrograde motion of the gatherer E.

I claim as my invention—

The combination of the shuttle-driver slide G, the lever H, having a shoe, I, provided with projections *i i'* and *k k'*, securing a positive and equal intermittent motion of the lever, and the temper-screw J, regulating the movement or travel of the ruffler slide-plate, as set forth.

In testimony of which invention I have set my hand hereunto.

WILLIAM H. LEWITT.

Witnesses:

SAML. KNIGHT,  
ROBERT BURNS.