

J. D. SOURWINE.

Ruffing-Attachment for Sewing-Machines.

No. 163,699.

Patented May 25, 1875.

Fig. 1.

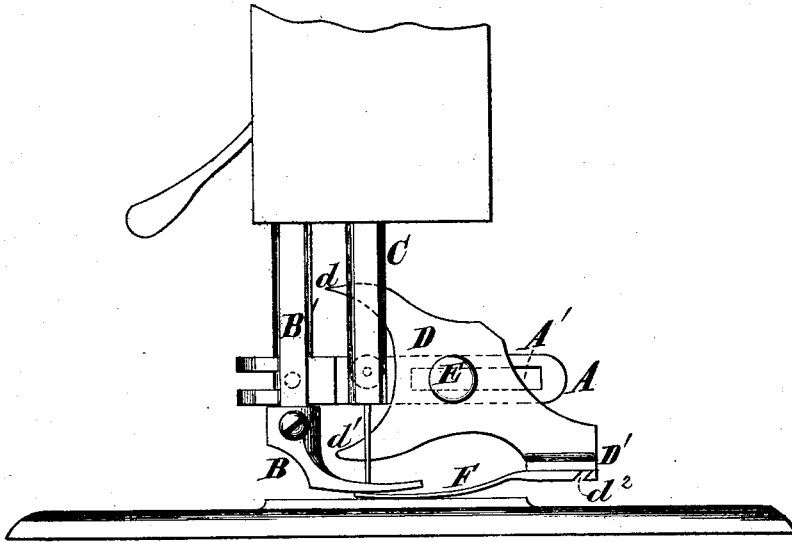


Fig. 2.

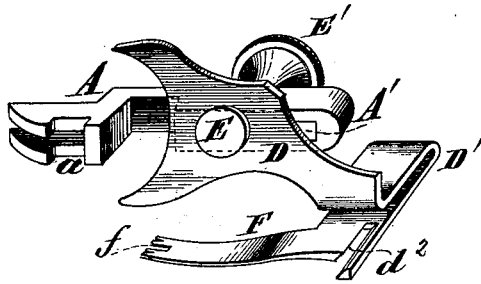


Fig. 3.



Witnesses:
A. Ruppert.
C. J. Bils

J. D. Sourwine
Inventor.
D. P. Holloway & Co
Attys

UNITED STATES PATENT OFFICE.

JOHN D. SOURWINE, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN RUFFLING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **163,699**, dated May 25, 1875; application filed November 11, 1874.

To all whom it may concern:

Be it known that I, JOHN D. SOURWINE, of Indianapolis, in the county of Marion and State of Indiana, have invented a certain Improvement in Rufflers for Sewing-Machines, of which the following is a specification:

This invention relates to that kind of rufflers in which the finger used for gathering the material is connected to one arm of a lever, the other arm of which is forked, with the prongs arranged in the path of the needle-clamping screw, which alternately strikes the upper and lower prong, imparting the requisite oscillations to the lever for the laying of the ruffles by the gathering-finger.

My improvement consists in forming the lever and gathering-finger of a single piece of metal, and in combining the same with a horizontally-slotted bar, to be connected to the presser-foot bar, and a fulcrum-pin adjustable to and from the needle-bar for regulating the stroke of the ruffler or gathering-finger.

In the annexed drawings, Figure 1 is a front elevation of my improved ruffling attachment showing the connection and relative arrangement of the parts to the presser-foot bar and needle-bar of a sewing-machine. Fig. 2 is a perspective view of the ruffling attachment disconnected. Fig. 3 illustrates the form of the fulcrum-pin.

The same letters of reference are used in all the figures in the designation of identical parts.

The active parts of the ruffler are supported on a bar, A, one end of which is forked, and is provided with a recess, as at *a*, to partly embrace the bar B' of the presser-foot B, it being detachably secured to said bar B' by a suitable clamping-screw. A bend is formed in the bar A near this end, so that it may pass back of the needle-bar C, beyond which it extends a considerable distance, and is there provided with a horizontal elongated slot, A'.

The lever D of the ruffler turns upon the cylindrical part *e* of the fulcrum-pin E, the flat portion *e*¹ of which fits the slot A', while its reduced screw-threaded shank *e*², extending through bar A, receives a nut, E', for clamping the pin to its supporting-bar at any point within the range of slot A'. The

width of part *e* of the pin is just sufficiently greater than the thickness of the lever D to allow free play of the latter, no matter how tightly nut E' may have been screwed up. The arm of lever D pointing toward the needle-bar is forked, and it oscillates in a plane just in rear and in close proximity to the needle-bar, so that its prongs *d* and *d*¹ will be in the path of the needle-clamping screw, shown in dotted lines in Fig. 1. The other arm of lever D is bent into a horizontal laterally-extending loop, D', from the extreme end of which the gathering or ruffling finger F projects at about right angles, reaching to beneath the presser-foot, up against which it bears. This ruffling-finger is made of thin steel, and, besides small prongs at its end for taking hold of the material to be ruffled, has a slit, *f*, for the passage of the needle. A slit, *d*², is also made in rear of and transversely to the ruffling-finger in the lower bar of loop D', through which the band to which the ruffles are sewed is guided under the finger.

From the foregoing description, it will be understood that on each upstroke of the needle the head or protruding part of its clamping-screw strikes the upper prong *d* of lever D, oscillating it so that the ruffling-finger will advance and fold or ruffle the material being sewed under the presser-foot, and that on each downstroke the lower prong *d*¹ will be in like manner struck, and cause the ruffling-finger to recede preparatory to laying another ruffle. The retreating movement of the finger will, however not begin until the needle has penetrated the material, thus holding the same against displacement by the finger.

The length of stroke of the ruffler can readily be governed by adjustment of the fulcrum-pin E of lever D, in the slot A'. In fact the latter is made so long that the ruffler can be entirely thrown out of action without detaching it from the machine.

The construction of the ruffler being exceedingly simple—comprising but few parts—it will be found very durable and not at all liable to become disarranged and inoperative.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the slotted bar A A', horizontally-adjustable fulcrum-pin E, and the ruffler composed of lever D *d* *d*¹, and finger F, constituting a single unchanging piece, all substantially as and for the purpose specified.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

JNO. D. SOURWINE.

Witnesses:

D. P. HOLLOWAY,
B. EDW. J. ELLS.