(Model.)

E. J. TOOF.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 450,649. Patented Apr. 21, 1891.

Fig. 1.

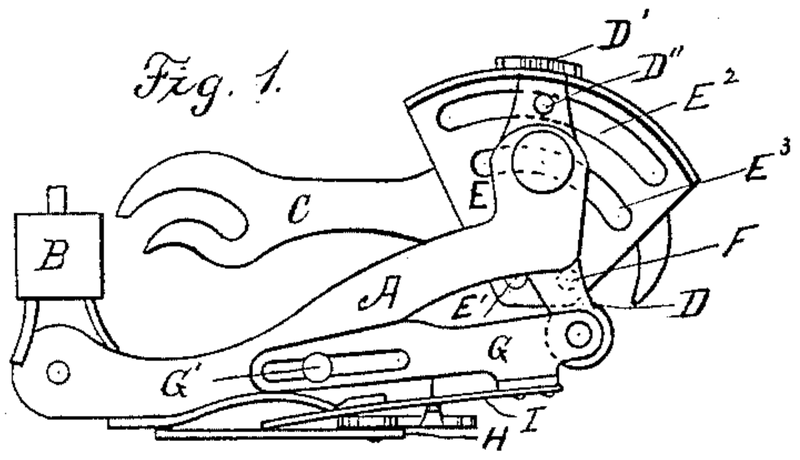


Fig. 2.

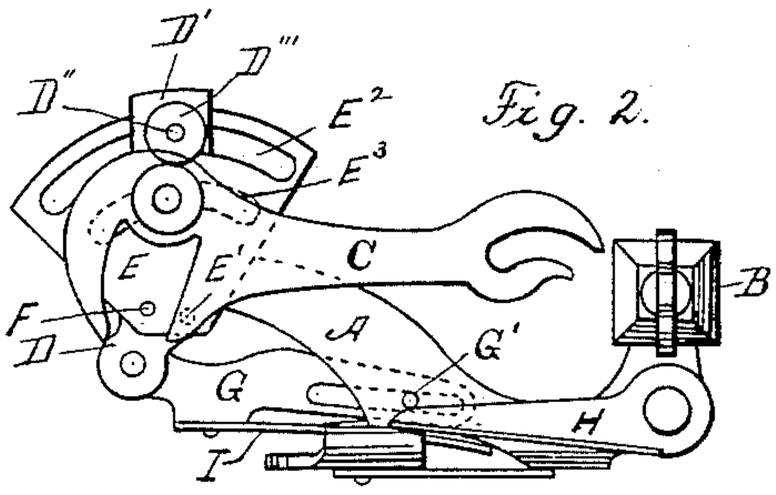
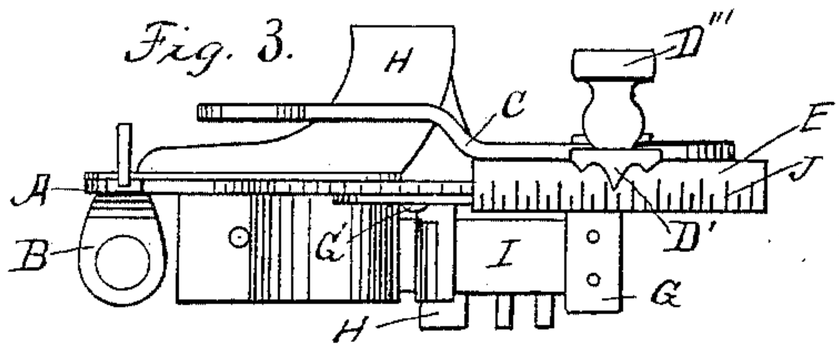


Fig. 3.



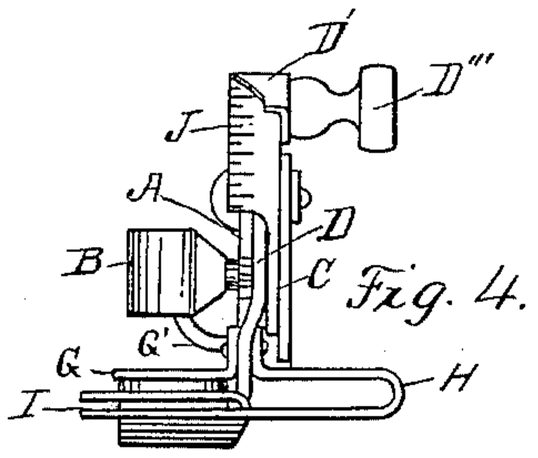


Fig. 4.

Fig. 5

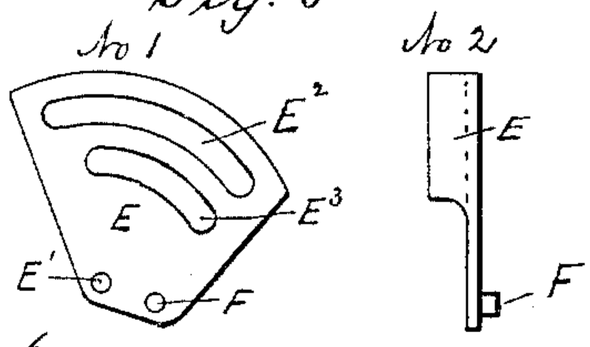
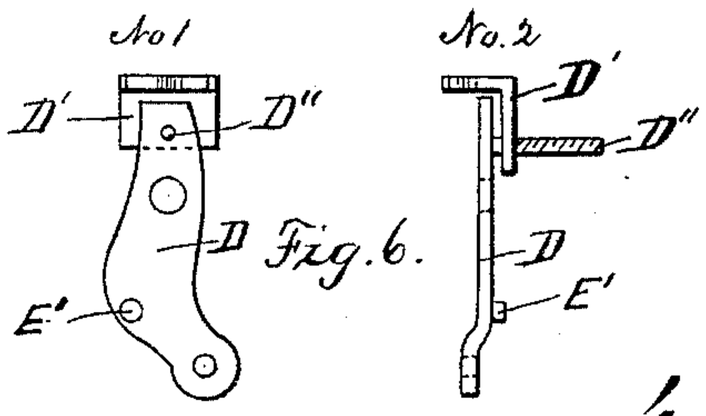


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN J. TOOF, OF NEW HAVEN, CONNECTICUT.

RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 450,649, dated April 21, 1891.

Application filed October 14, 1887. Serial No. 252,390. (Model.)

To all whom it may concern:

Be it known that I, EDWIN J. TOOF, a citizen of the United States, and a resident of the city of New Haven and State of Connecticut, have invented new and useful Improvements in Ruffling Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to that class of sewing-machine attachments adapted to gather and ruffle and which are usually provided with a gathering-blade reciprocated by levers through the medium of the needle-bar; and my invention consists in the means for regulating and gaging the stroke of the gathering-blade, as will hereinafter be set forth in detail, and pointed out in the claims.

The object of my improvements is to produce a combination of as few parts as possible for adjusting and gaging the stroke of the gathering-blade in the most simple and positive manner and also reduce the cost of construction.

In the drawings, Figures 1 and 2 represent views in elevation from opposite sides. Fig. 3 represents a top view. Fig. 4 represents a view of that end of the invention opposite to that which fastens to the presser. Figs. 5 and 6 are views in detail of different parts and will be mentioned hereinafter.

A is a supporting-frame, which is provided with an upright arm supporting a socket (represented at B) for securing the device to the presser.

C is a bell-crank lever bifurcated at both ends and pivotally connected at or near its angle to an upright part of the supporting-frame A.

D is a vertical lever (a face view of which is shown in No. 1 of Fig. 6) pivotally connected near the center of its length to the upright part of the supporting-frame A at the same point and by the same means as the said lever C. This lever D is also pivotally connected at its lowest point to the blade-carrier G, and is provided at its upper extremity with a stationary threaded pin D″, extending through a slot (represented at E^2) in the cam E. An index-pointer D′ slips on the said pin, (in manner shown in No. 2 of Fig. 6,) and this is secured in position by an adjusting-nut D‴, serving as a clamp.

E is a cam (a face and edge view of which are shown in Fig. 5) pivotally connected to the said vertical lever D at E′. This cam is provided with two slots—one at E^2, serving as a guideway for the said pin D″, and the other at E^3 for the pivot L to slide in. F represents a projection on the surface of the said cam for engaging the two vertical arms of the said lever C, one of these arms rounding in on its inner edge and the other being straight. The space between them is variable, and by moving the cam E either to the right or left and holding it stationary by tightening the nut D‴ it moves the projection F either up or down in the variable space, and thereby varying the amount of lost motion, which, being greater or less, determines the length of stroke of the gathering-blade I.

J is a gage on the flange of the cam E, over which slides the point of the index-pointer D′.

G′ is a projection on the supporting-frame extending through a slot in the blade-carrier and serving as a guide for the same.

The operation of my improved device is as follows: The lever C being actuated by the needle-bar and the vertical bifurcated end thereof engaging the projection F of the cam E, which is pivotally connected at E′ to the vertical lever D, said lever being pivotally connected to the blade-carrier G, the gathering-blade is thereby reciprocated. The cam E is pivotally secured to one side of the vertical lever D, and by moving this cam E from one side to the other and securing it in the desired position by an adjusting-screw D″ it raises the projection F either up or down, and the space between the arms being variable it varies the amount of lost motion, and thus alters the length of stroke of the gathering-blade.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A ruffling attachment consisting of the supporting-frame, the ruffling-blade and carrier, the bell-crank lever C, bifurcated at one end for connection with the needle-bar and at its opposite end provided with a cam-shaped opening, the vertical lever D, pivoted at one end to the supporting-frame and at its opposite end connecting with said blade-

carrier, the cam E, pivotally connected to said vertical lever D and provided with a pin or projection thereon projecting into said cam-shaped opening in the bell-crank lever C, and the adjusting-screw for holding the cam E laterally adjustable at its free end to adjust the position of the pin or projection thereon vertically within the said cam-shaped opening in the bell-crank lever C, substantially as described, and for the purpose set forth.

2. A ruffling attachment consisting of the supporting-frame, the ruffling-blade and carrier, the vertically-arranged lever D, pivotally connected at its opposite ends with the supporting-frame and blade-carrier, respectively, the bell-crank lever C, pivoted to said supporting-frame, bifurcated at one end for connection with the needle-bar and at its opposite end provided with a cam-shaped opening, the cam E, pivotally connected with the said vertically-arranged lever D and provided with a pin or projection extending within the said cam-shaped opening in the bell-crank lever C, the adjusting-screw for holding the free end of said cam adjustable laterally to adjust the pin or projection thereon vertically in said cam-shaped opening, and the index-pointer and gage, substantially as and for the purpose set forth.

EDWIN J. TOOF.

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