

(Model.)

E. J. TOOF.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 450,648.

Patented Apr. 21, 1891.

Fig. 1.

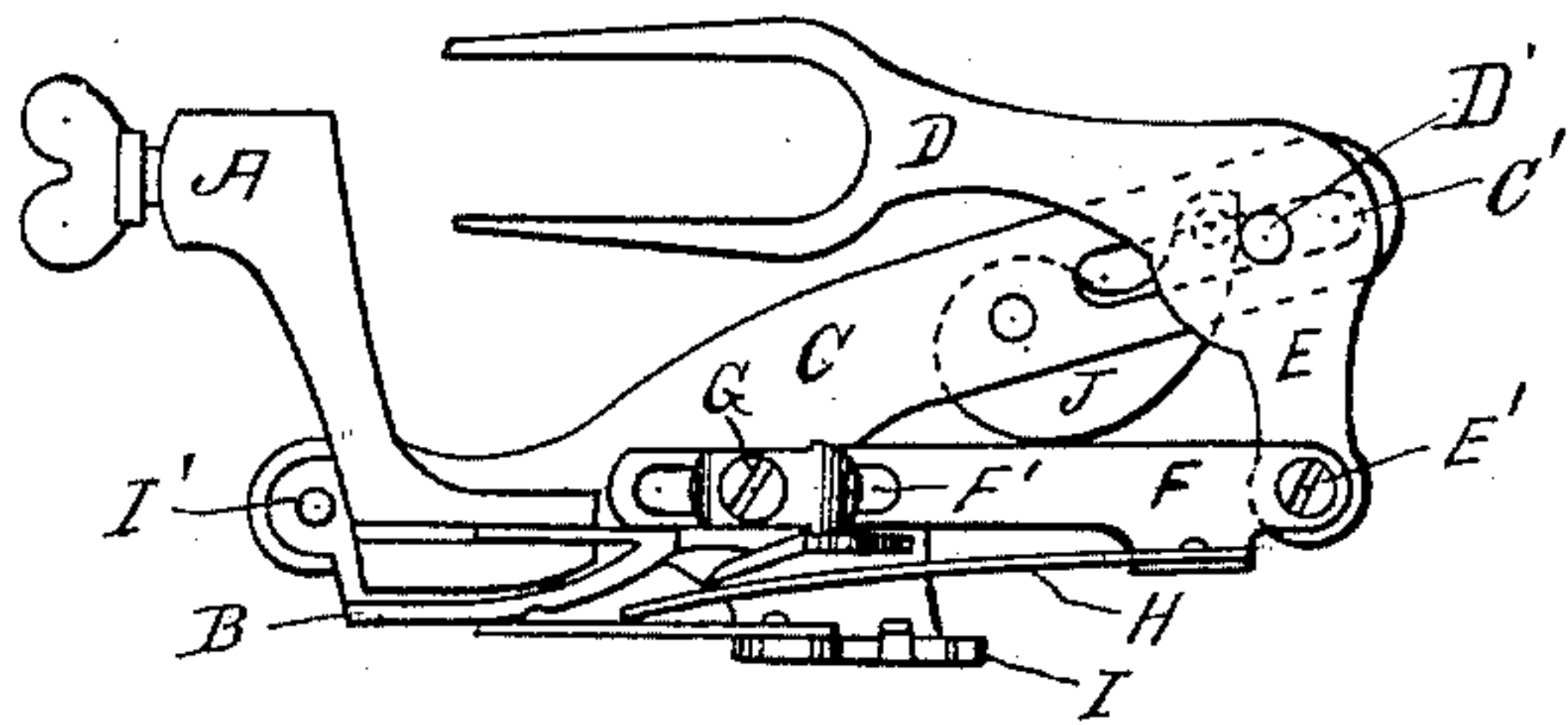


Fig. 2.

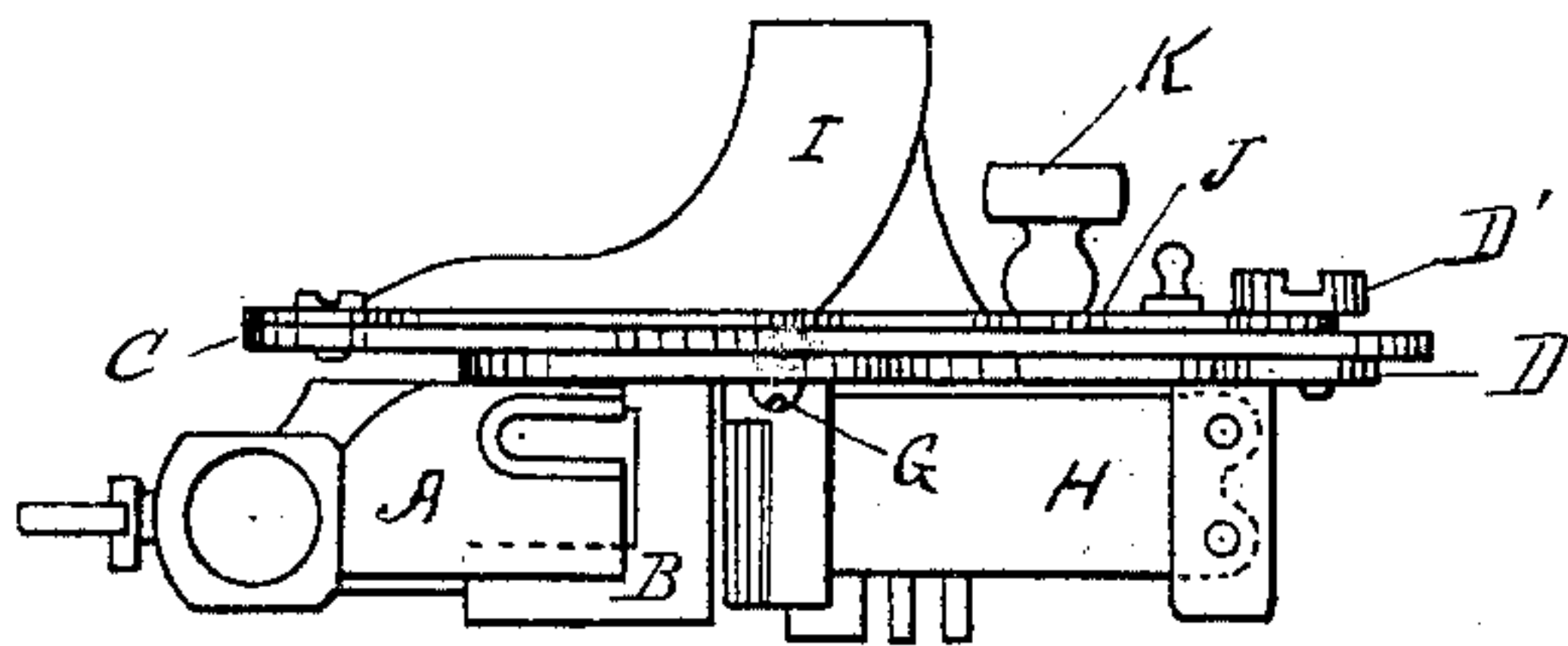
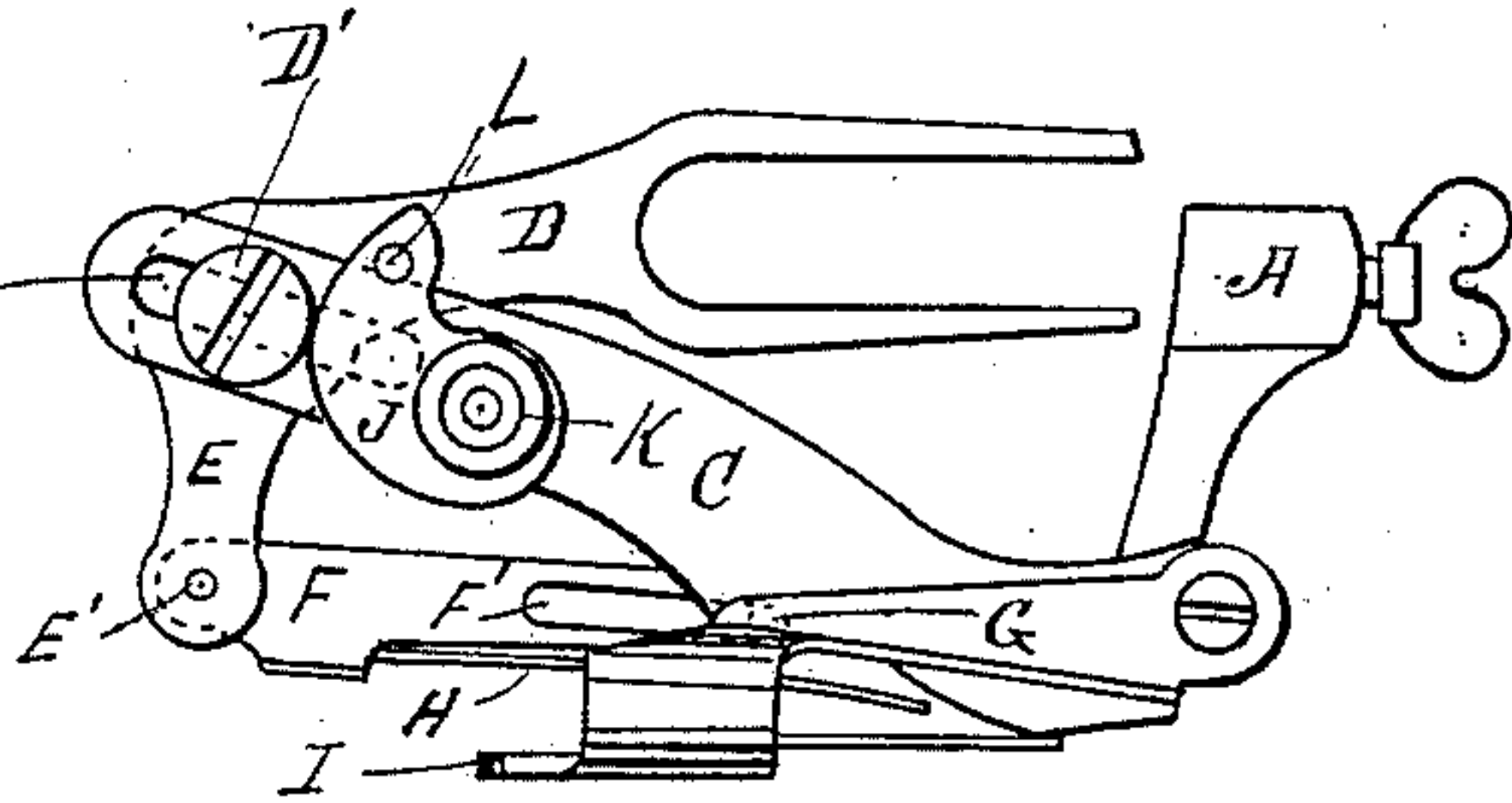


Fig. 3.

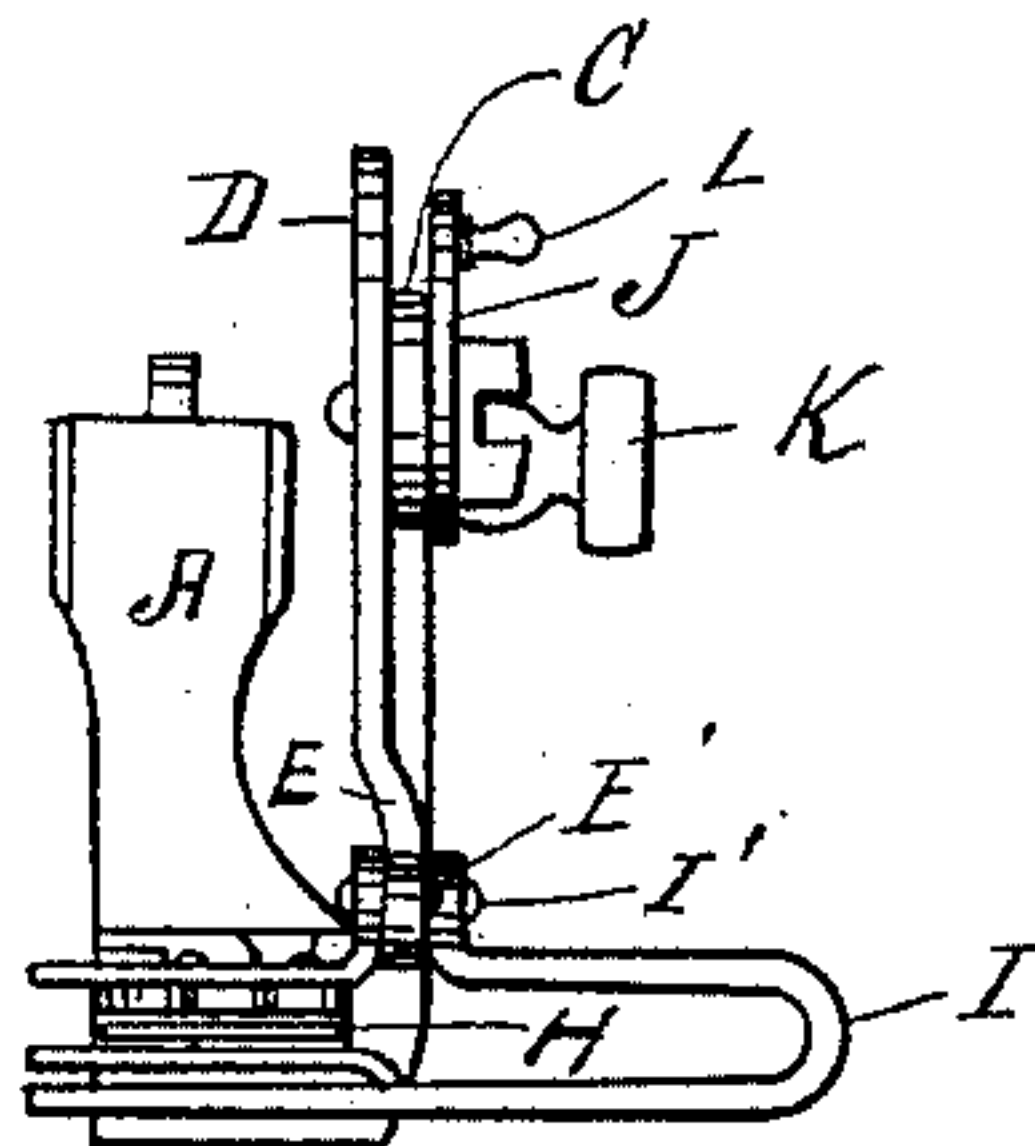
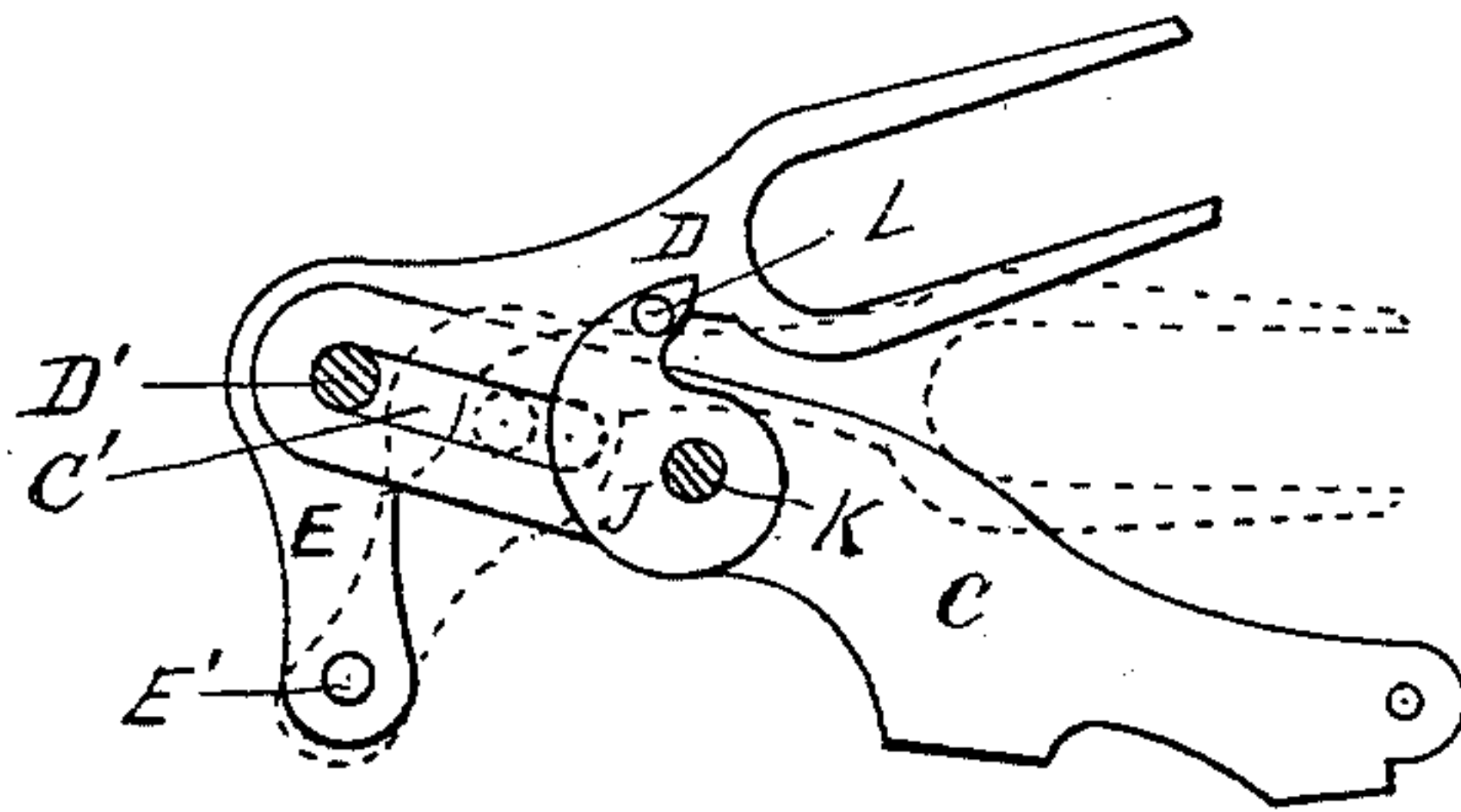


Fig. 4.

Fig. 5.



Witnesses

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RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 450,648, dated April 21, 1891.

Application filed October 14, 1887. Serial No. 252,389. (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 New Haven, State of Connecticut, have invented new and useful Improvements in Ruffling Attachments for Sewing-Machines, of which the following, taken in connection with the drawings furnished, is a specification.

My invention relates to that class of sewing-machine attachments adapted to ruffle and gather, and is generally provided with a gathering-blade operated by levers that are actuated by means of the needle-bar.

The object of my improvement is to produce means for varying the length of stroke of the gathering-blade, to simplify and reduce the number of parts, and lessen the cost of manufacture. These objects are obtained by the invention illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of my invention in position on the presser. Fig. 2 represents a side view of the invention opposite that shown in Fig. 1, and Fig. 3 represents a top view of the invention attached to the presser. Fig. 4 represents a view of that end opposite to that which fastens to the presser. Fig. 5 represents the frame and actuating mechanism detached from the presser-foot.

In the drawings, A is the presser-foot, which is provided with a longitudinal groove on each side thereof, into which slide two parallel lips or flanges, which lips or flanges form parts of a projection B of the frame, thus securing the attachment to the presser-foot of the machine.

C is the upright part of the frame.

C' is a slot in the upright part of the said frame.

D is a bifurcated bell-crank lever, which is secured to the frame C by a rivet or screw forming a pivot D', which screw or rivet passes or extends through the slot C', its head being larger than the width of the said slot within which it is adapted to traverse. The said lever D has its fulcrum on the walls of the slot C', one wall of which is formed by an adjustable cam J, which cam is secured to the supporting-frame by a set-screw K. By moving the said cam J either up or down by means of the knob L, with which it is provided, it increases or decreases the distance or space be-

tween the wall formed by the said cam J and the opposite wall, (more clearly shown in Fig. 5,) thus varying the amount of lost motion, which, being greater or less, determines the length of the stroke of the gathering-blade H.

E is a vertical arm or extension of the lever D, and is connected to the blade-carrier F by a screw or rivet E'.

I is a separator-plate, which is pivotally connected to an arm of the frame at I'.

F is the blade-carrier, which is provided with a slot F'. A screw G, extending through this slot and fastening in the frame C, serves to hold a small sustaining-plate on the blade-carrier. The said plate is provided with two arms, which lap over the sides of the blade-carrier and act as a guide, and also as an additional means for supporting the said blade-carrier. The set-screw K serves to hold the cam securely in a fixed position when desired. The screw may, however, be dispensed with, although I consider the attachment more perfect with it.

The operation is as follows: The gathering-blade is reciprocated by the needle-bar through the medium of the bell-crank lever D. Altering the position of the fulcrum of the lever varies the stroke of the gathering-blade, and in this device, the fulcrum being in a slot, the length of which can be varied by means of an adjustable cam, (the action of which has already been explained,) thus varying the length of space forming the rest for the fulcrum, thereby enabling the traverse of the fulcrum to be more or less limited or extended.

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

1. In a ruffling attachment for sewing-machines, the combination, with a supporting-frame provided with an elongated opening therein, a gathering-blade, blade-carrier, separator, and an actuating-lever fulcrumed in said elongated opening by means of a connecting arm or screw, of a cam secured on said frame adjacent to the opening therein, adapted to form an adjustable wall of the latter for varying the amount of traverse of the fulcrum of said actuating-lever, substantially as and for the purpose set forth.

2. In a ruffling attachment for sewing-ma-

chines, the following parts in combination: a supporting-frame provided with an elongated opening therein, a bell-crank actuating-lever fulcrumed in said opening by means of a suitable connecting fulcrum-arm, a cam for varying the length of said elongated opening, a gathering-blade, and a carrier, substantially as described, and for the purpose set forth.

3. In a ruffling attachment for sewing-machines, the combination, with a supporting-

frame provided with a slot or opening therein, an actuating-lever fulcrumed in said slot or opening, a cam for varying the length of said slot or opening, an adjusting-screw for adjusting said cam, a gathering-blade, and a carrier, substantially as and for the purpose set forth.

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Witnesses:

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