

(No Model.)

A. JOHNSTON.

RUFFLING AND GATHERING ATTACHMENT FOR SEWING MACHINES.

No. 349,279.

Patented Sept. 14, 1886.

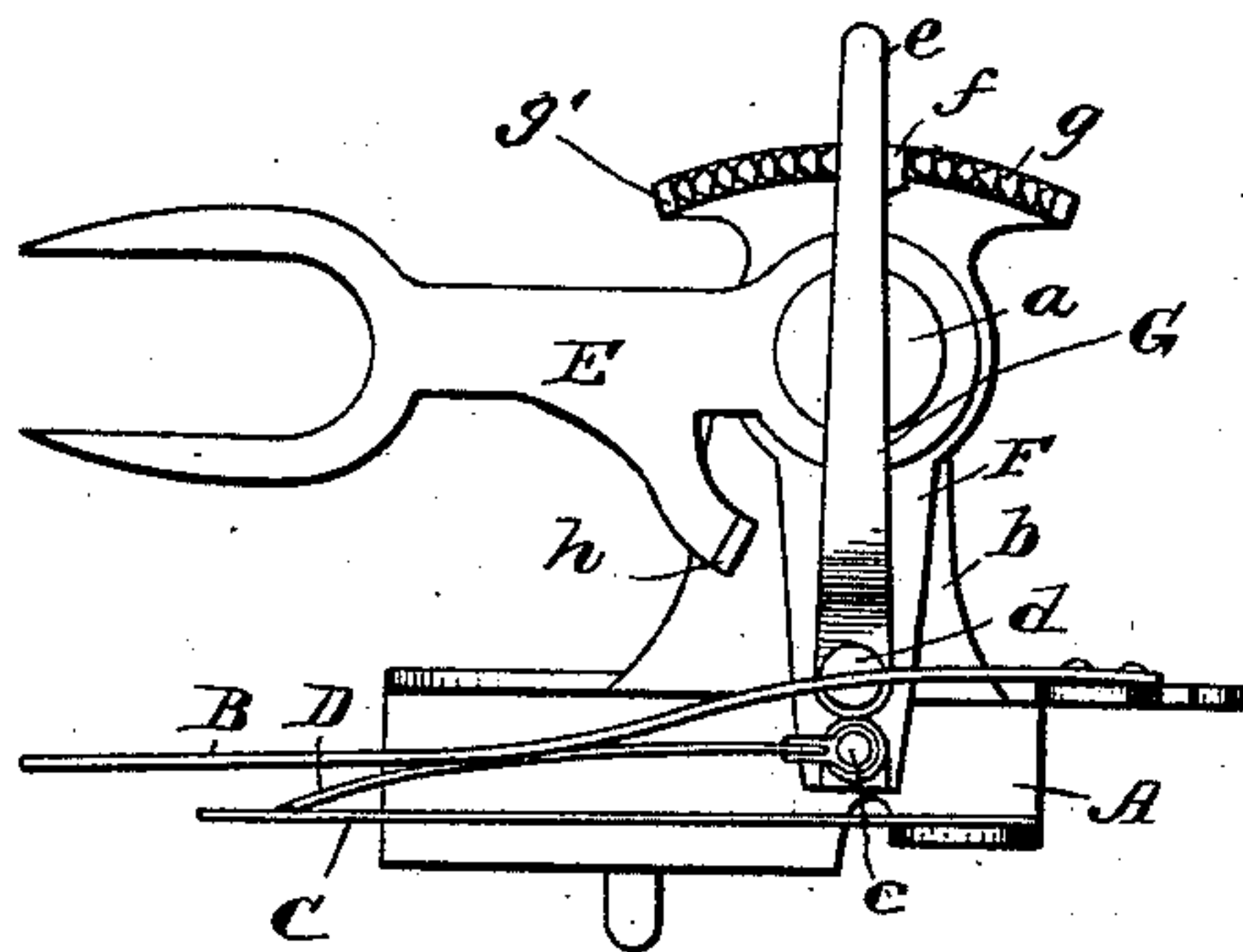


Fig. 2.

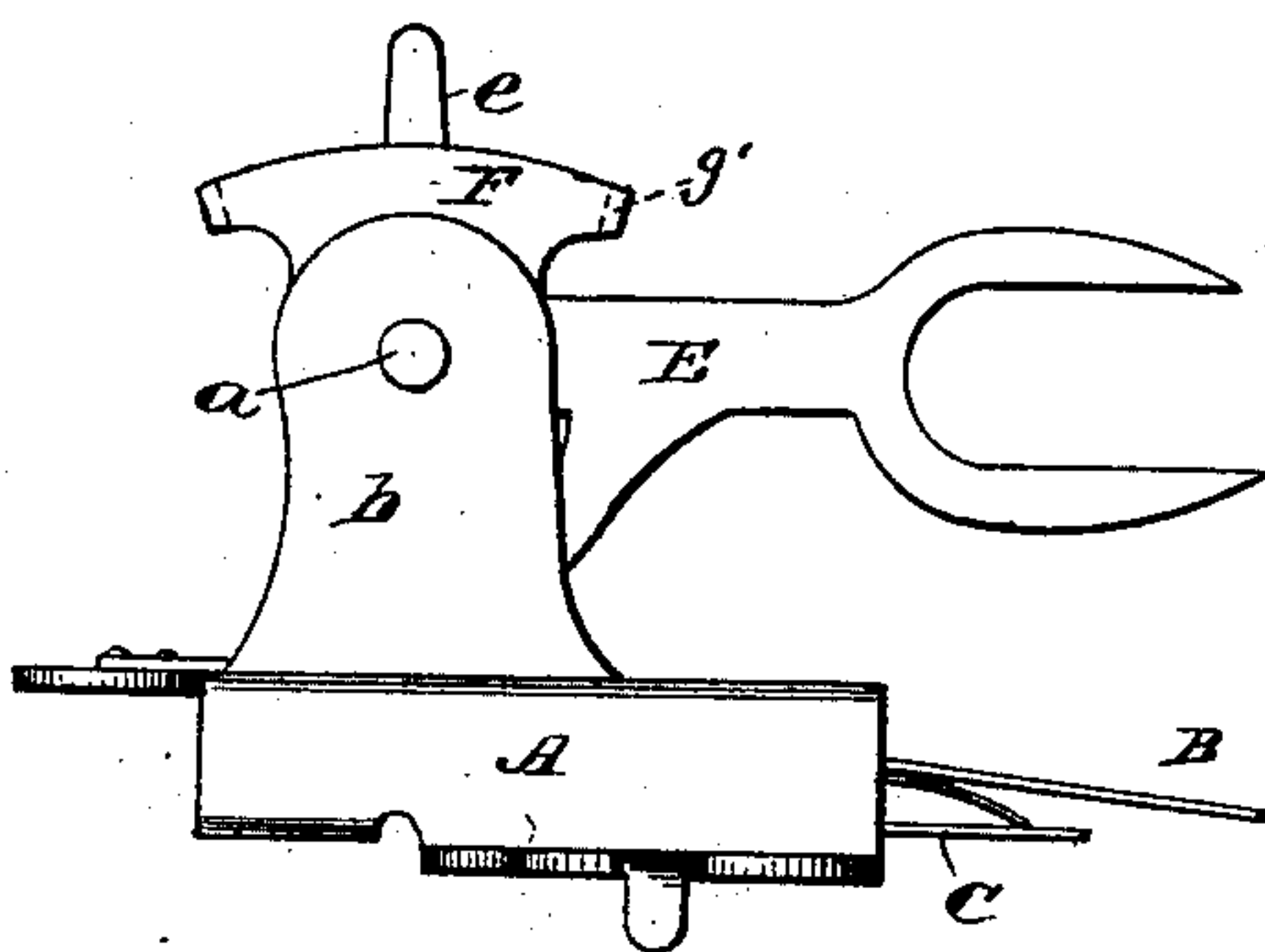
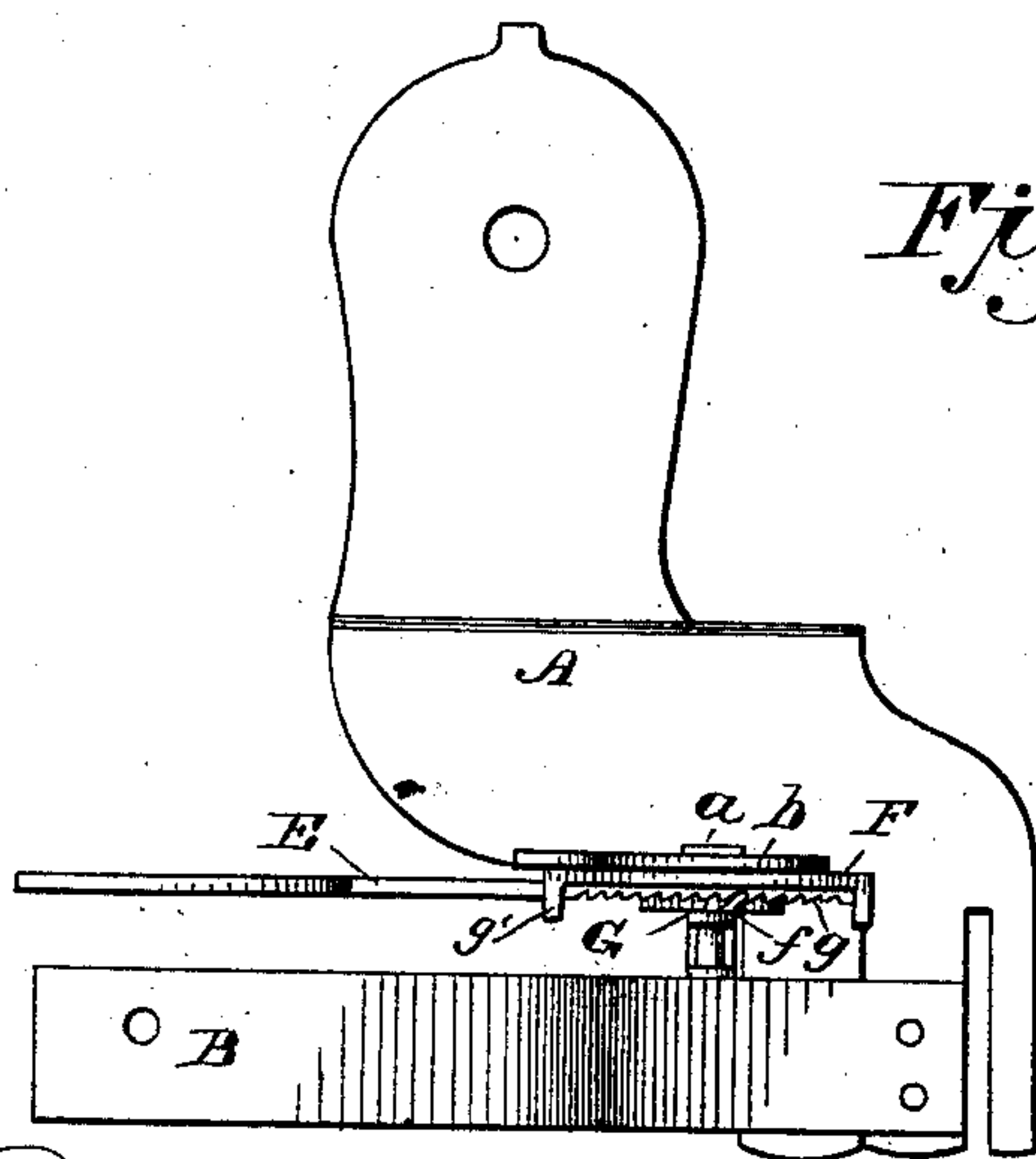


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF OTTUMWA, IOWA.

RUFFLING AND GATHERING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 349,279, dated September 14, 1886.

Application filed April 17, 1884. Serial No. 128,204. (No model.)

To all whom it may concern:

Be it known that I, ALLEN JOHNSTON, of Ottumwa, in the county of Wapello and State of Iowa, have invented a new and useful Improvement in Ruffling or Gathering Attachments for Sewing-Machines, which improvement is fully set forth in the following specification.

This invention relates to that class of rufflers or gatherers in which the ruffling device, usually a reciprocating blade, is operated through two levers, one of which receives motion from a suitable moving part of the sewing-machine, and the other of which, receiving motion from the former, communicates it to the ruffling device.

The invention consists in the new means or combination of devices for imparting motion to and for adjusting the stroke of the ruffling device or blade.

The accompanying drawings represent an attachment constructed in accordance with the invention.

The device is shown on an enlarged scale.

Figures 1 and 2 are views in elevation from opposite sides, and Fig. 3 a plan view.

A is the ruffler-frame, which, as shown, is adapted to be secured to the bed-plate of the sewing-machine. A ruffler-frame adapted to be supported from the presser-bar or attached directly to the stationary arm of the machine could be used instead, being equally well-known forms of ruffler-frames.

B is the auxiliary presser-foot, which extends under the usual presser-foot of the machine. In a foot-ruffler or ruffler adapted to be attached to the presser-bar of the sewing-machine it would not be used.

C is the separator, fastened at one end to an arm of the ruffler-frame.

The ruffling device or blade D is operated by means of the two levers E F, which are pivoted at *a* to the upright plate *b*, making part of the ruffler-frame. The lever E is forked at the outer end, and receives motion from the needle-bar or from other suitable part of the machine. The ruffler-blade is fastened to the projection or pin *c* at the lower part of the lever F.

The regulating device G, in the form of an elastic device or spring-arm, is pivoted at *d* to the lever F. The end *e* projects beyond the

lever and forms a handle by which the lever can be turned. It is provided with a lip, *f*, which engages the ratchet or toothed surface *g*, in virtue of the elasticity of the device, spring, or arm. By means of the handle *e* the device, arm, or spring can be withdrawn to disengage the lip *f*, and it can then be turned in either direction, to increase or diminish the stroke of the ruffling device or blade. When the needle-bar rises and lifts the forked end of lever E, the said lever strikes the projection *g'* on the lever F, and during the rest of its ascent carries with it the lever F. The ruffler-blade is thereby advanced to make a fold or gather in the fabric, which is inserted between it and the separator. When the forked end of lever E is carried down, the projection *h* thereon strikes the adjustable device, arm, or spring G, and carries back the lever F and the ruffler-blade. By turning the said device or arm to the right in Fig. 1 the lever E makes contact with the same later in its descent, and therefore carries back the ruffler-blade to a less distance. By turning the device or arm G to the left in Fig. 1 the contact will occur sooner, and the ruffler-blade will be carried a greater distance. The stroke of the ruffler may thus be lengthened or shortened within the limits of the adjustment. Whenever the device or arm is moved and the handle released, the elasticity immediately makes the lips *f* engage the teeth of ratchet *g* and the parts are retained in position.

It is evident that modifications may be made in the details of construction without departing from the spirit of the invention, and that parts of the invention may be used separately.

I claim the new improvements described, to wit:

1. A ruffling or gathering attachment composed of the following elements in combination, to wit: the ruffler-frame, the movable ruffling device or blade, the lever having a fork with one member over or above the other in the outer end for engaging the needle-screw of the sewing-machine, the lever connected with the ruffler-blade and receiving positive motion in both directions from the former lever, both said levers being arranged on the same side of the needle-hole as the said ruffler-blade, and supported on said ruffler-frame so as to turn in the same direction, and the stroke-regulating

means for varying the amount of lost motion between the levers, said means comprising an elastic arm or spring and a ratchet or serrated surface, which said arm or spring engages, substantially as described.

2. In a ruffling or gathering attachment, and in combination with the ruffling device or blade and the two levers, one provided with a fork in the end to engage the needle-screw of the sewing-machine, and both arranged on the same side of the needle-hole as the said ruffling device or blade, the stroke-regulating means comprising a spring-arm fastened to one of said levers at the bottom, in proximity to the ruffling device or blade, and engaging with the ratchet or serrated surface on the opposite side of the fulcrum of said lever, substantially as described.

3. In a ruffling or gathering attachment, the

combination, with the ruffler-frame and the ruffling-blade, of operating mechanism for imparting positive motion in both directions to said ruffling-blade from the needle-bar of the sewing-machine, said mechanism comprising two levers supported on said ruffler-frame in front of the needle-hole by a common screw, and stroke-regulating means carried by said levers, said means comprising an elastic arm or spring and a ratchet or serrated surface with which said arm or spring engages, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALLEN JOHNSTON.

Witnesses:

ROY M. EMMET,

GEO. F. HALL.