

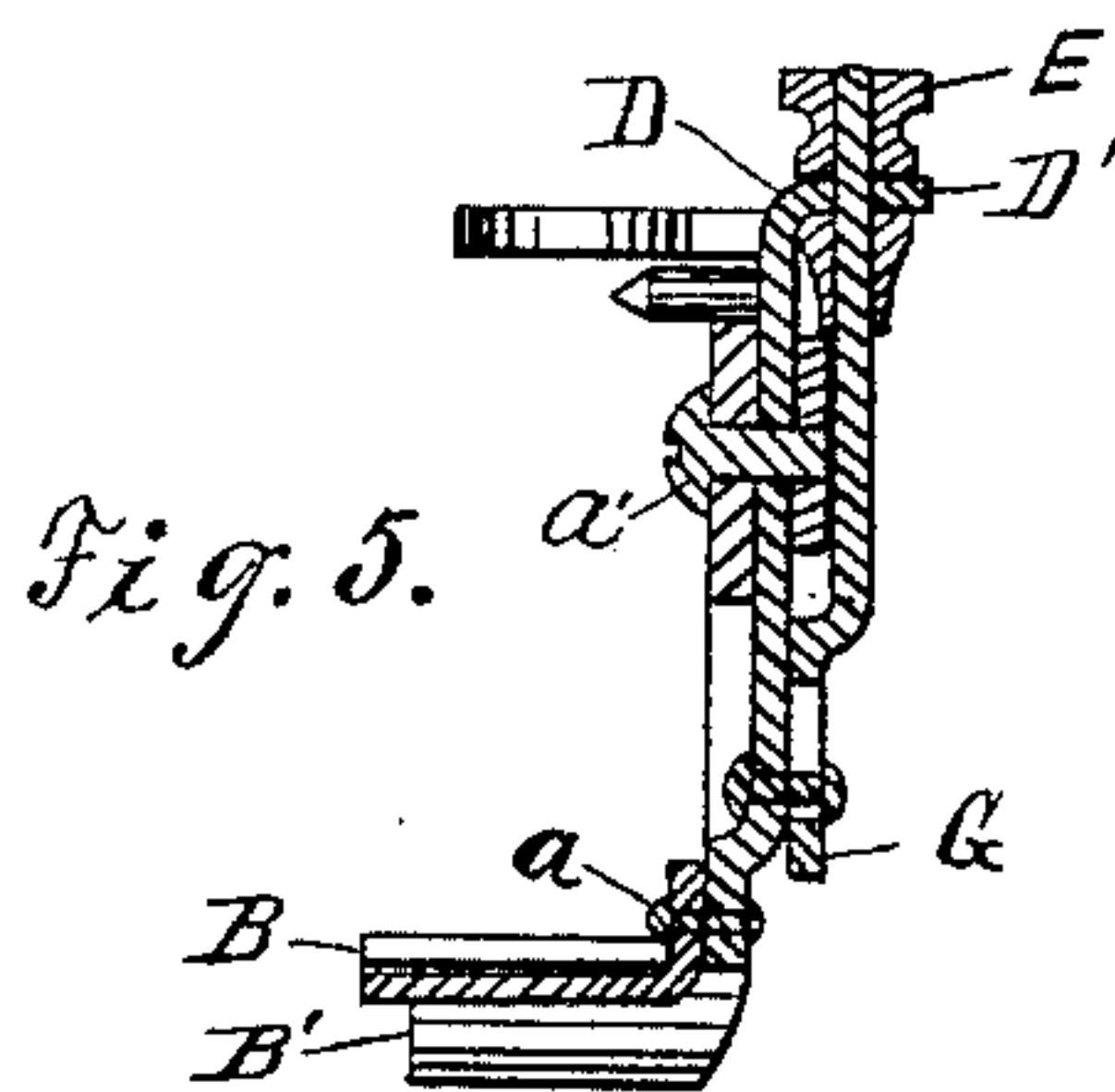
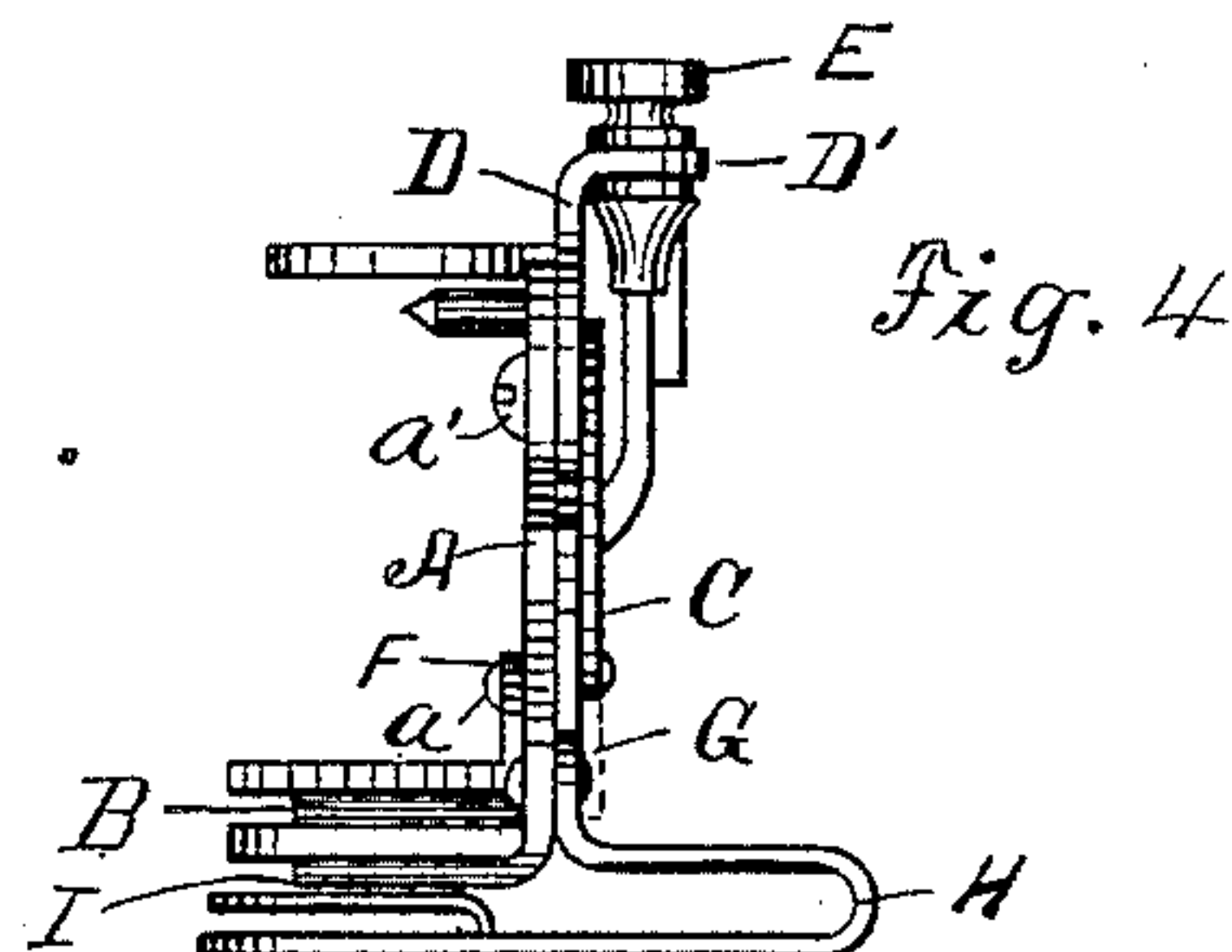
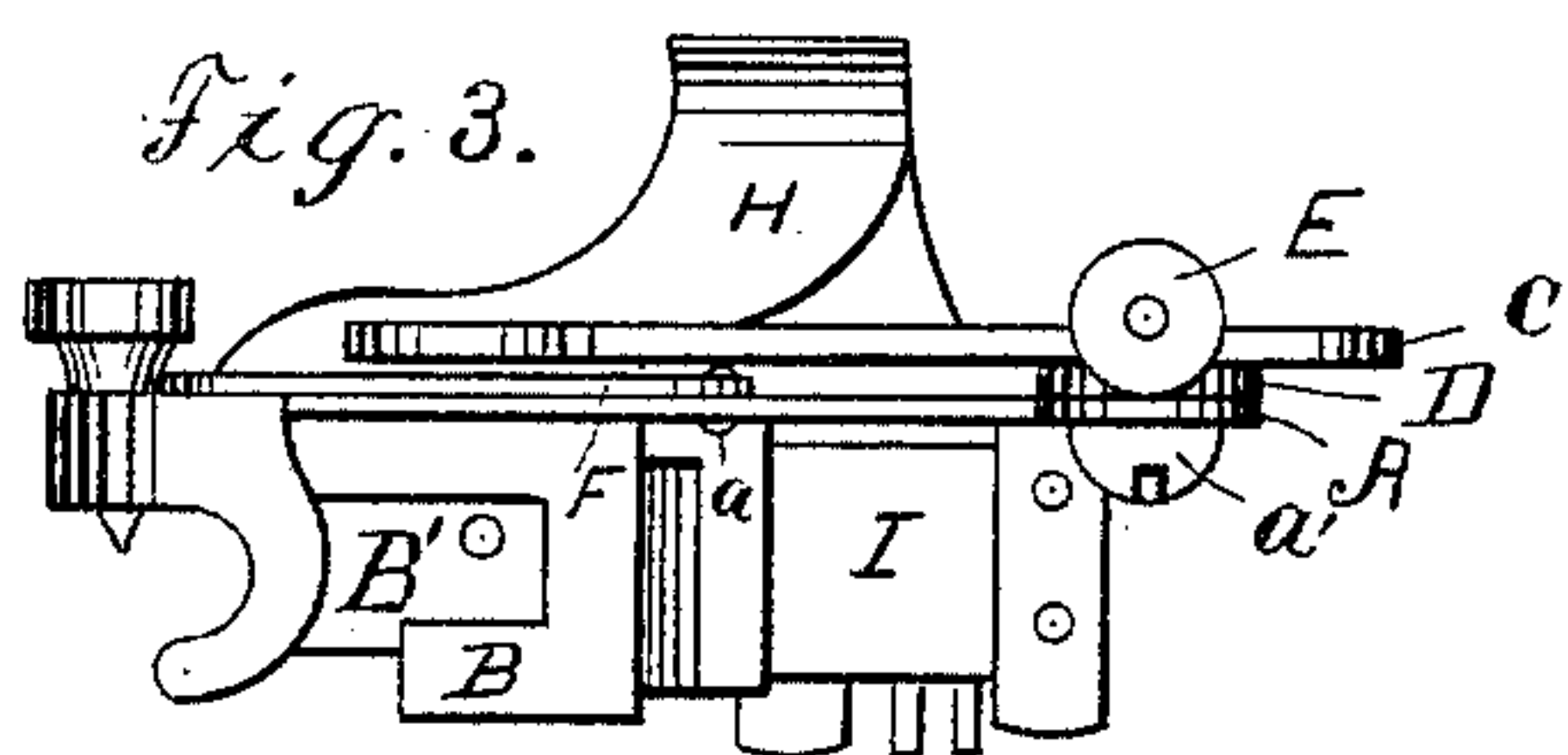
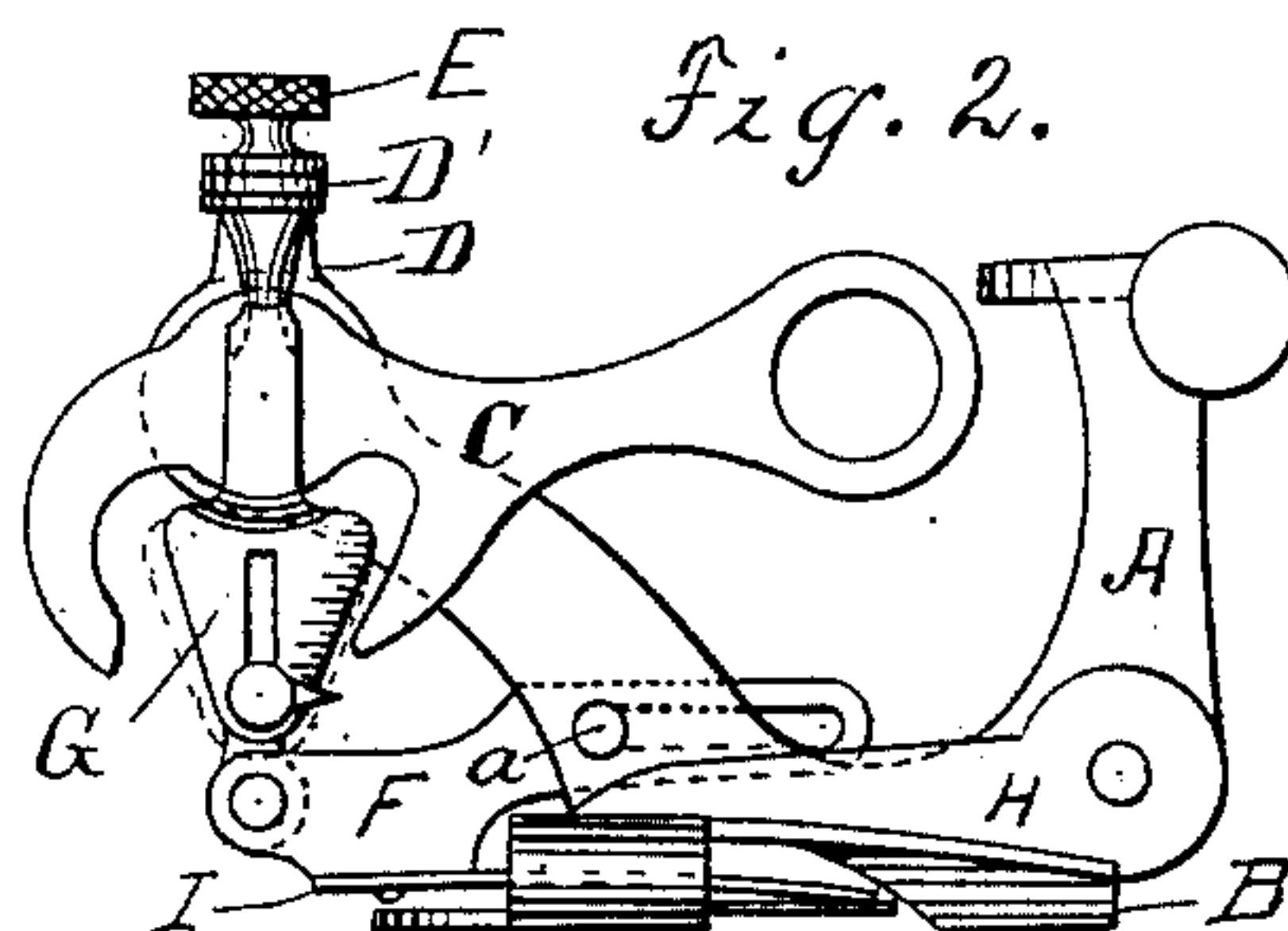
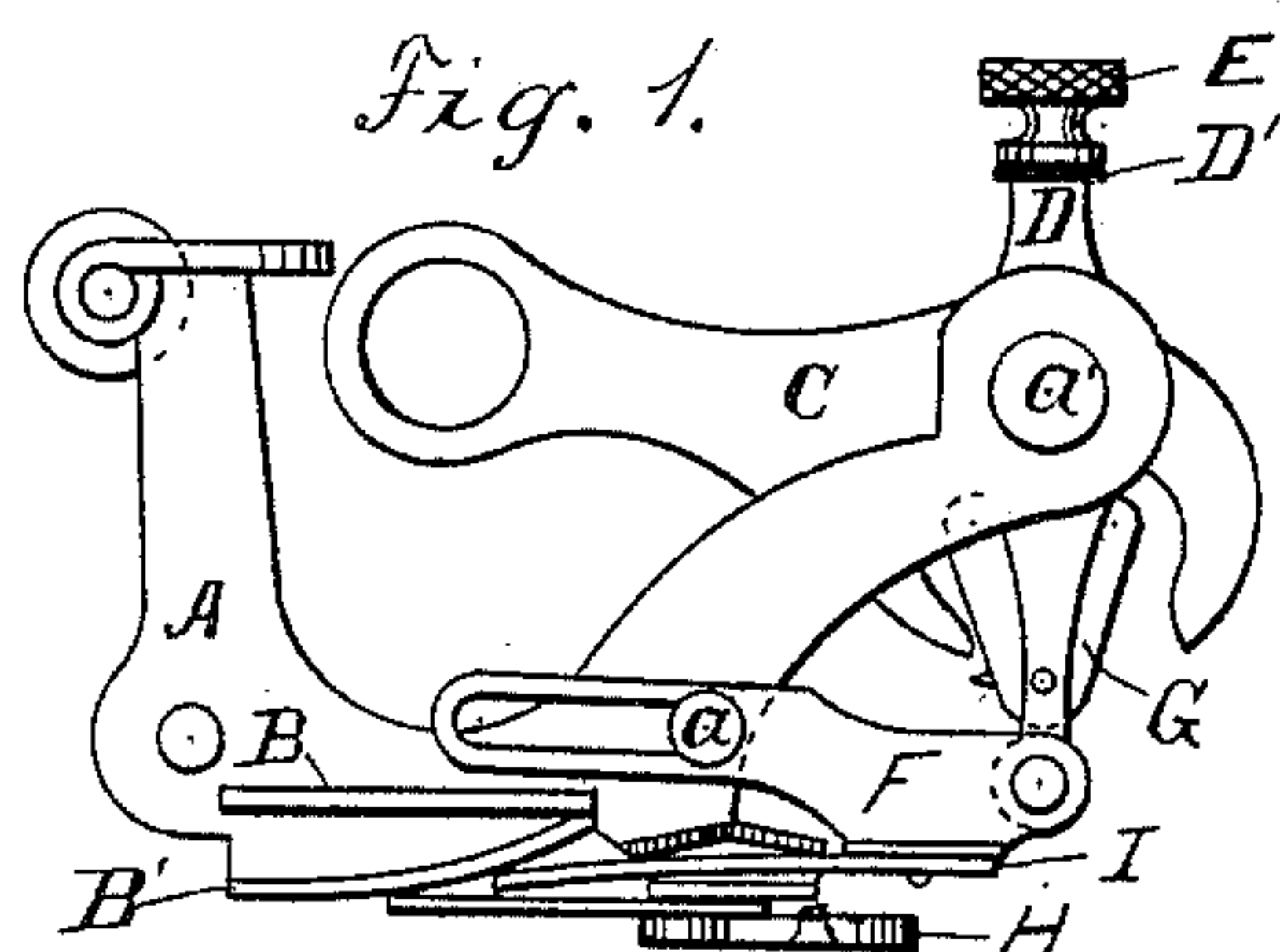
(Model.)

E. J. TOOF.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 450,647.

Patented Apr. 21, 1891.



*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. 450,647, dated April 21, 1891.

Application filed July 26, 1887. Serial No. 245,393. (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, county of New Haven, and State of Connecticut, have invented new and useful Improvements in Ruffling and Shirring Attachments for Sewing-Machines, of which the following, taken in connection with the drawings, is a specification.

My invention relates to that class of attachments for sewing-machines usually provided with a blade reciprocated by levers through the medium of the needle-bar adapted to gather, ruffle, and shirr; and it consists in the means for adjusting the throw of the blade, acting in conjunction with the said levers, in a manner as will hereinafter be set forth in detail, and pointed out in the claims.

Referring to the drawings, Figures 1 and 2 represent the two sides of my improved ruffler, and Fig. 3 represents a top view of the same. Fig. 4 represents the end of the ruffler opposite that which connects with the presser-bar of a sewing-machine. Fig. 5 represents a sectional view of the ruffler-frame, levers, and blade with the separator-plate detached.

To enable others skilled in the art to more fully understand the construction and operation of my improved ruffler, I will explain more in detail.

In the drawings, the part indicated at A represents that part of the frame of the attachment intended to connect with the presser-bar of a sewing-machine, the upper part of which is provided with a recess forming a part of a circle, (see Fig. 3,) at the mouth of which is located a screw, which, in conjunction with the horn formed by the curved part of the frame, serves, in conjunction with the slipper part of the frame, to receive the toe part of the presser-foot to securely fasten the attachment in position for operation. The slipper part referred to forms a socket for the toe part of the presser-foot and is formed by an upper part and a lower sole, (indicated at B and B', respectively,) which parts are secured to the one side of the frame proper in position to embrace the toe of the presser-foot when placed in position for operation.

C is a horizontally-arranged lever pivoted to an upright forming a part of the frame proper, one end of which is adapted to em-

brace the needle-screw of the needle-bar of a sewing-machine and the opposite or free end is bifurcated at its lower edge, forming two horns or curved arms, and D represents a vertical lever pivoted to the same projection and at the same point with the bifurcated lever C. It is also pivotally connected with a horizontally-arranged bar forming a guide (shown at F) for directing the gathering-blade I, which is connected thereto. The said bar or guide in the particular instance is slotted and is held and guided in proper position by a rivet or screw the head of which is more clearly shown in Fig. 1 of the drawings at a. To this vertical lever is secured a cam (indicated at G) adapted to act vertically thereon, and is held in position upon said lever by a screw, rivet, or other suitable means within a head, the diameter of which is larger than the slot with which the cam is provided, and by an adjusting screw or nut (shown at E) connecting with the upper part of said cam, which screw or nut is supported by an overhanging ear extending from the upper part of the said lever, substantially as shown in the drawings at D'.

The attachment is also provided with a separator-plate hinged to the main frame in a manner to enable the operator to swing the same outwardly parallel and in the same line with the gathering-blade to enable the operator to shirr goods or to form ruffles and gathers with the attachment without detaching the said separator.

The operation of my improved adjusting device in the combination described is as follows: By turning the thumb nut or screw E in the proper direction the cam G is forced in a direction either up or down, thereby diminishing or increasing the space between the sides thereof and the ends of the horns of the horizontal lever adapted to collide therewith. In this manner the throw of the gathering-blade is varied as well as the fullness of the ruffle, gather, or shirr. One side of the said cam extends outwardly at a different and greater angle than does the other, so that the variation caused by the adjustment of the cam is greater on the retreat of the blade than the advance of the blade to the needle, the object being to afford the proper adjustment with a single device by which a very percep-



tible variation may be secured in the retreat over the advance of the blade.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. In a ruffling, gathering, and shirring attachment for sewing-machines, the combination, with a supporting-frame, gathering-blade, a horizontally-arranged actuating-lever adapted at one end for connection with the needle-bar of a sewing-machine and at its opposite end provided with a fork or opening, and a vertically-arranged lever and a connecting-guide for supporting and operating said gathering-blade, of a tapering or wedge-shaped device adjustably secured on said vertical lever and provided with a threaded arm extending through and supported by an arm or flange projecting from said vertical lever and an adjusting-screw located on said threaded arm of the adjusting device to operate the latter, in a manner substantially as and for the purpose set forth.

2. A ruffling, gathering, and shirring attachment for sewing-machines, consisting of a supporting-frame adapted to be detachably held by the presser-bar of a sewing-machine, a horizontally-arranged actuating-lever adapted at one end for connection with the needle-bar and at or near its opposite end is bifurcated, forming an opening, a vertically-arranged lever, a connecting-guide for supporting a gathering-blade, an adjustable hinged separator-plate, and a tapering or wedge-

shaped adjusting device adjustably supported on said vertical lever and within the said opening in the horizontal lever by pin-and-slot connection in a manner to have a vertical adjustment thereon and provided with a threaded stem, and an adjusting-screw located on said stem and held in a vertically-stationary position by means of an arm or flange of said vertical lever, substantially as and for the purpose set forth.

3. In a ruffling, gathering, and shirring attachment for sewing-machines, the combination, with a supporting-frame adapted for connection with the presser-bar gathering-blade, a horizontally-arranged actuating-lever provided with a fork or opening located adjacent to its pivot-point, a vertically-arranged lever and a connecting-guide for supporting and operating said gathering-blade, and a tapering or wedge-shaped adjusting device adjustably attached to said vertical lever and operating within the forked end of said actuating-lever for regulating the throw of the blade and provided with a threaded stem extending through and supported by an ear or flange of the said vertical lever, of an adjusting screw or nut located on said threaded stem at a point above the said supporting-flange, substantially as and for the purpose set forth.

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