

(No Model.)

J. W. BETZ.

FELLING ATTACHMENT FOR SEWING MACHINES.

No. 520,292.

Patented May 22, 1894.

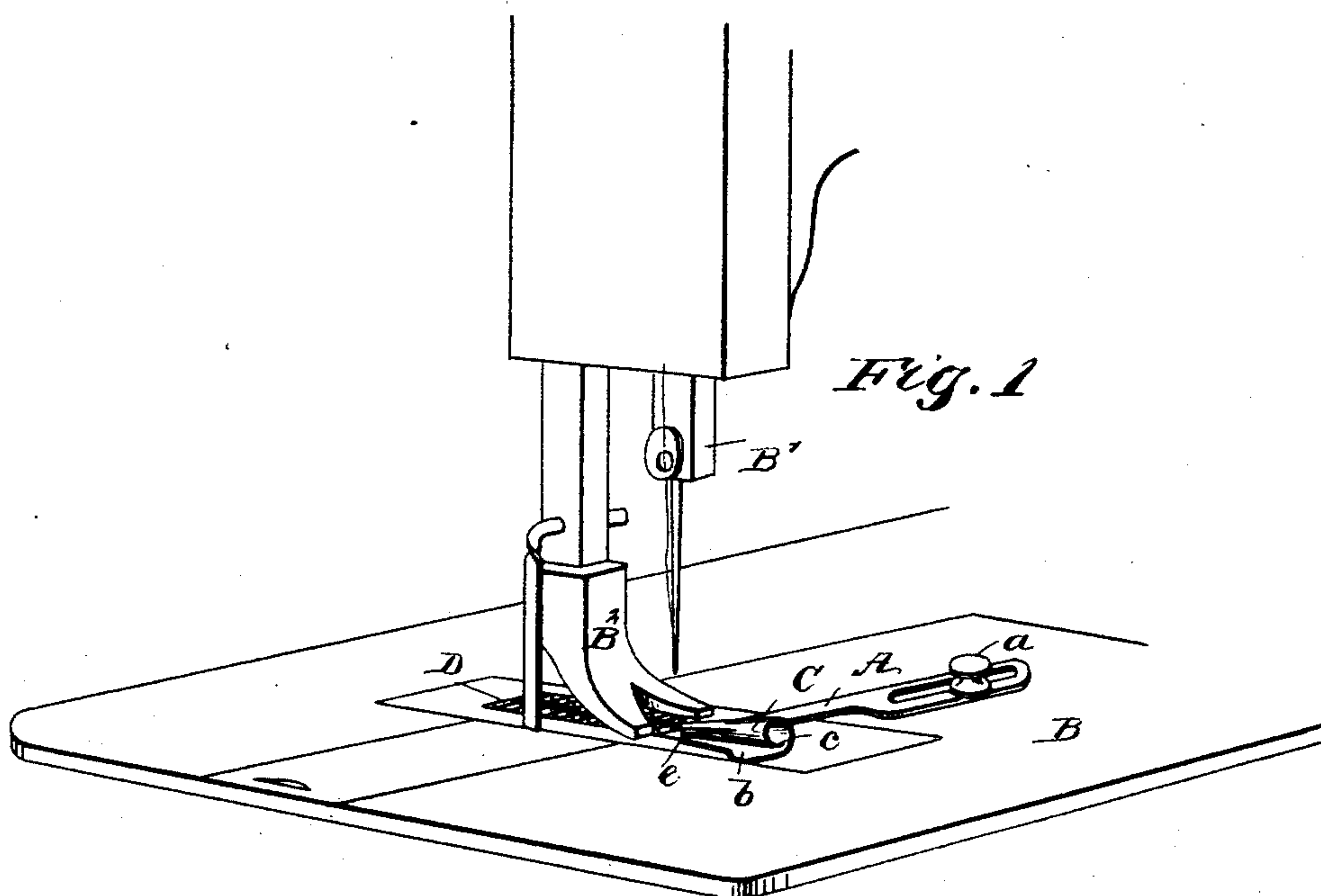


Fig. 1

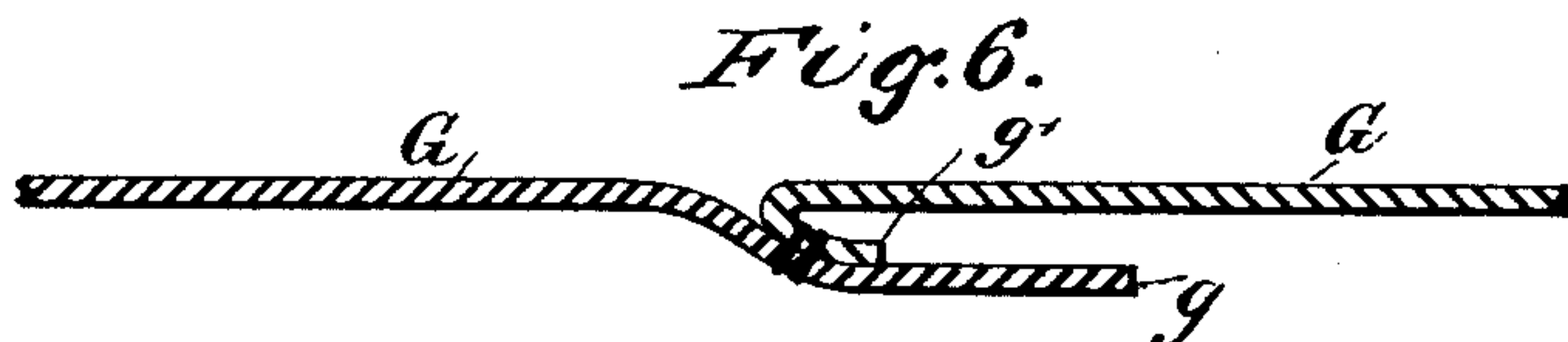


Fig. 6.

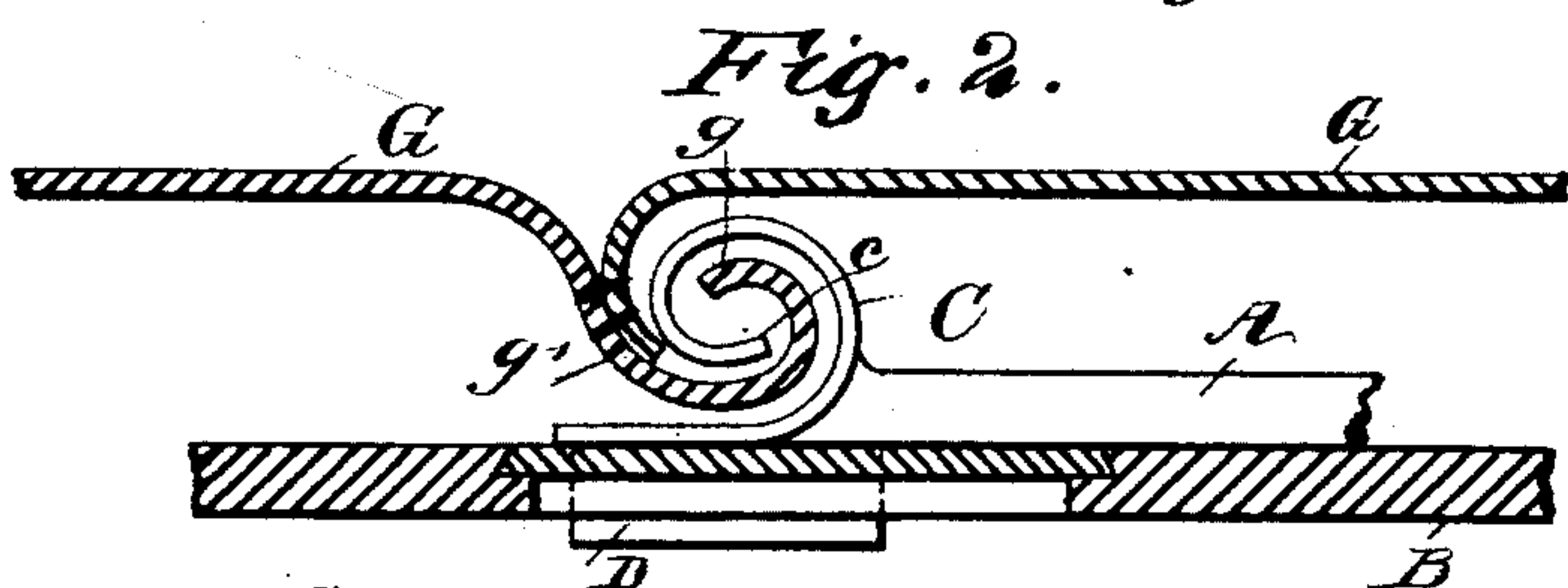


Fig. 2.

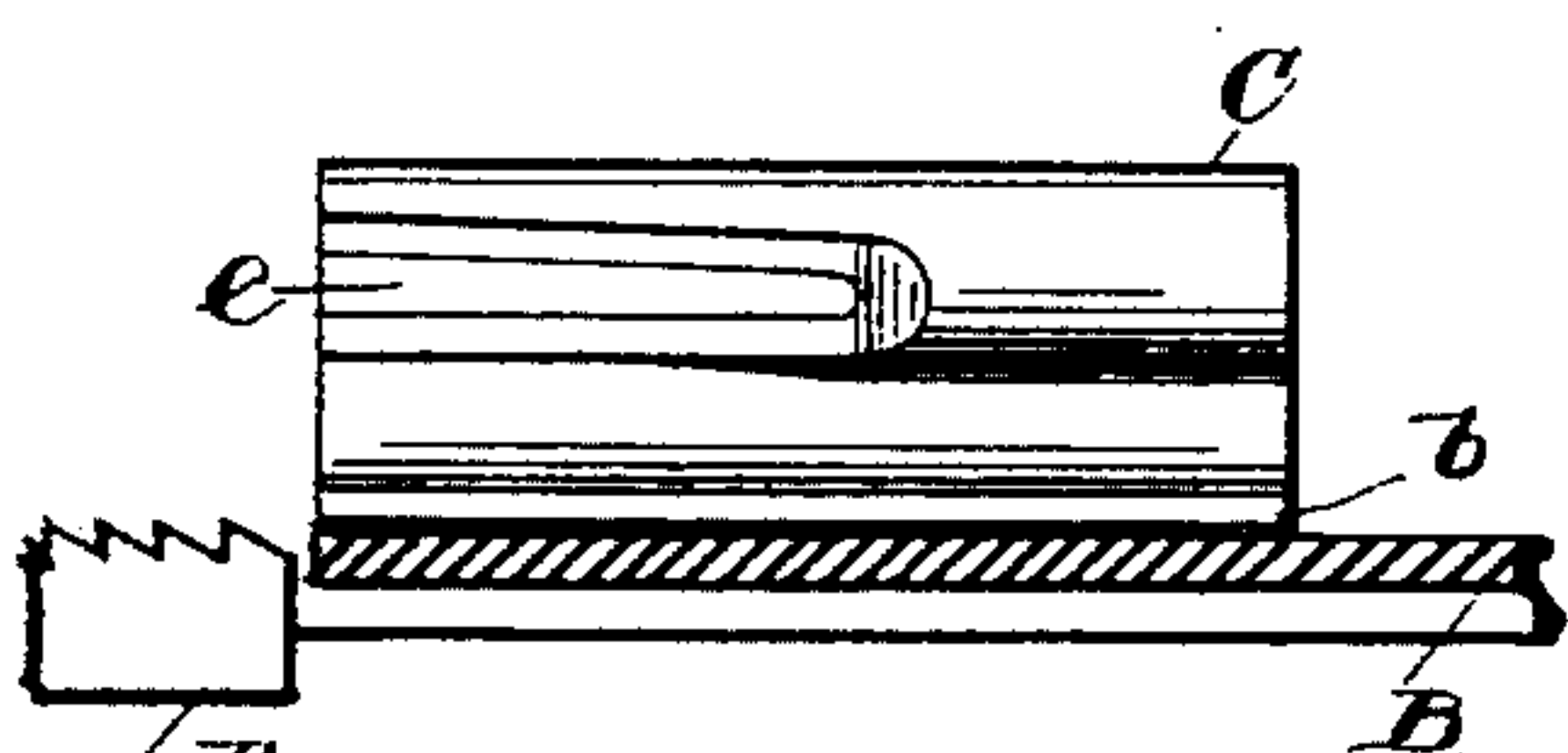


Fig. 4.

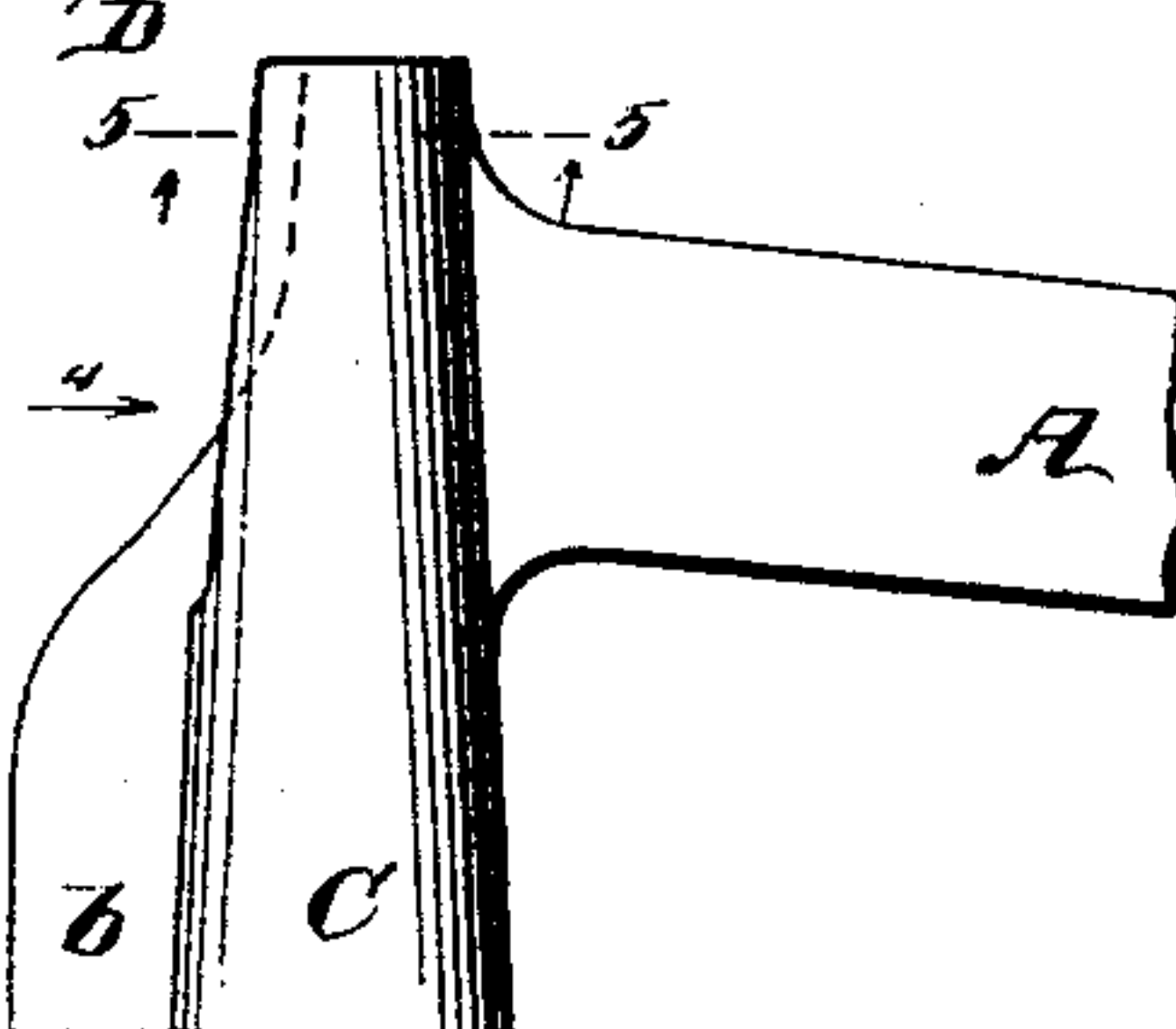


Fig. 3.

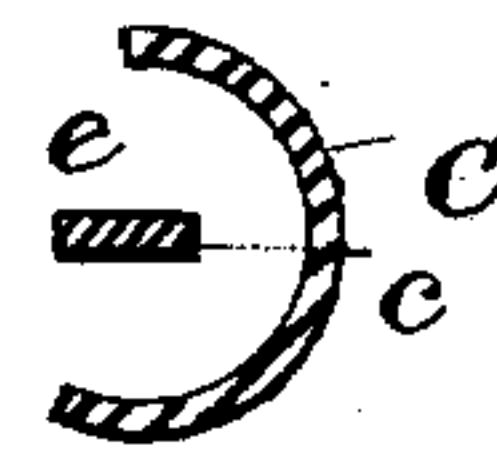


Fig. 5.

WITNESSES:

J. A. Bergstrom
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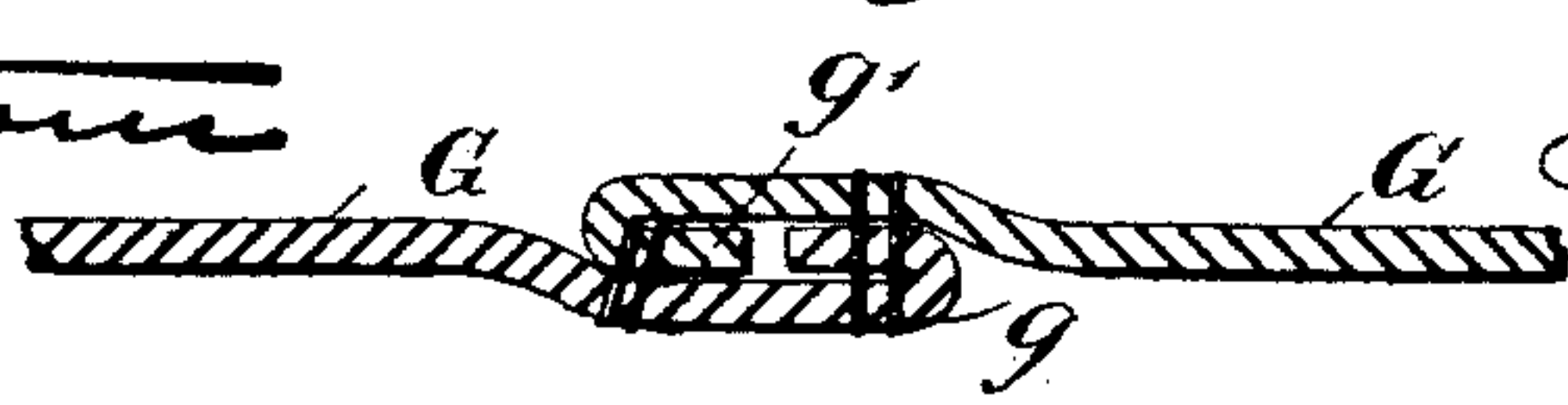


Fig. 7.

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JOSEPH W. BETZ, OF BROOKLYN, NEW YORK.

FELLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 520,292, dated May 22, 1894.

Application filed April 22, 1893. Serial No. 471,377. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. BETZ, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improved Felling Attachment for Sewing-Machines, of which the following is a full, clear, and exact description.

The object of this invention is to produce a novel, simple and inexpensive device for
10 attachment upon a sewing machine, which will afford means to fell seams so as to produce a welt finish therefor, in a superior manner, and that is adapted to do perfect work on curved portions of a garment with facility
15 and ease of manipulation.

To this end, my invention consists in the peculiar construction of the felling device, as is hereinafter described and claimed.

Reference is to be had to the accompanying
20 drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improvement, in position on a sewing machine
25 bed-plate. Fig. 2 is an enlarged broken end view of the improved device on a sewing machine bed-plate, the latter appearing in section and its feed block in full lines, and fibrous material engaged with the attach-
30 ment at a seam, showing the initial step in the production of a welt finish for the seam. Fig. 3 is an enlarged broken plan view of the device. Fig. 4 is a side view of the device opposite the arrow 4, in Fig. 3, a portion of the sewing machine bed-plate appearing in
35 section, and part of the feed block of the machine in full lines. Fig. 5 is a transverse sectional view, on the line 5—5 in Fig. 3. Fig. 6 represents the edge of two pieces of fibrous
40 fabric, and method of forming a joining seam thereon, which is to be felled; and Fig. 7 is an edge view of the fabric portions seamed together, and finished with a welt that has been produced with the improvement.

45 An arm A, is provided, having a proper length to adapt it to have a secured engagement with the bed-plate B, of a sewing machine, and locate the scroll head C, that is the feature of the invention, near the feed
50 block D, said arm being longitudinally slotted near the end that is to be clamped upon the bed-plate, for the introduction of a set

screw a, of ordinary form, that has a threaded engagement with the bed-plate when the device is secured thereon, as shown in Fig. 1. 55

The scroll-head C, is constructed of a single piece of sheet metal bent into scroll form, having the lip flange b, formed on it by projecting an edge portion of the sheet metal laterally beyond the scrolled portion. The
60 scroll-head C, is made coniform, the larger end portion being farthest removed from the needle bar B', of the sewing machine, thereby affording an entering throat for goods that is to pass through the scroll head. 65

The material forming the head C, is bent to curl the same from the top side of the arm A and return the edge c inwardly, and locate it at about an equal distance from the curved inner surface of the head, in different direc-
70 tions radially considered, this feature of construction being essential to adapt the device for its use. The head C, is transversely affixed to the arm A, at an angle to its edges which is preferably less than ninety degrees
75 with regard to the edge of the arm that is nearest to the outer edge of the bed-plate B, when the device is secured thereto.

An important feature of the device consists in the formation of a longitudinal slot e, in
80 the side of the scroll-head C, from its small end above the lip flange b. The scroll-head C, when in proper position for service, presses upon the bed-plate B, directly forward of the
85 presser foot B², and lies above and near to the serrated feed block D, if such a feeding device is a part of the sewing machine.

When a seam that joins two pieces of cloth such as G, is to be felled, for the production of a welt finish on the exposed side of the
90 garment that the cloth is a portion of, said seam is produced as represented in Fig. 6, by sewing the lapped edges of the cloth together on an ordinary sewing machine, or by hand, there being one edge portion g made wider
95 than the other edge g', to afford material from which to form the welt. The cloth G is now laid upon the bed-plate B, with the seam flaps in contact with this part of the sewing machine, and at one edge of the goods the end
100 of the wider seam flap g, is entered within the largest end of the scroll-head C, as shown in Fig. 2, the flap being curled over the free edge c, by the sliding movement of the goods

toward the presser foot B² under which it passes. The gradual contraction of the coniform scroll-head C, causes the seam flap *g* to be more closely folded so as to turn its outer edge in and nearly in contact with the edge of the other flap of the seam, as shown in Fig. 7; this disposition of parts being effected at the point of exit for the material at the small end of the scroll-head. By provision of the slot *e*, the free edge of the seam flap *g*, is permitted to pass laterally out of the scroll-head, and extend toward the edge of the narrow seam flap *g'* thereby insuring a neat welt of uniform width, if the wider flap *g* is of equal breadth throughout its length.

As before mentioned, the cloth that is to be welt finished at the seam, is imposed with the seam flaps *g, g'*, downwardly, the presser foot B² resting on the upper face of the goods, whereby the feed block D, has the contact of its serrated face with the wide seam flap *g*, enforced by the pressure of said foot. The machine being put in motion, causes the needle to sew the folded seam flap *g* along its folded edge upon the cloth G, through which the needle passes to penetrate said folded edge.

The peculiar construction of the improved scroll-head C, permits the feed block or other feeding device of a sewing machine, to have direct contact with the seam flap which is to form the welt, so that if the goods is cut bias, or the seam is curved, as on the inner and

outer seams of a garment sleeve, the fullness of the seam flap at its free edge will be properly gathered in as the work progresses, and a neat welt finish result, which cannot be produced by any mechanical device which will not permit such a contact of the feeding device with the seam flap, or in other words, allow the wide flap of the welt to enter the scroll from one side and curl around the free edge *c*, as shown in Fig. 2, while the garment or material whereon the welt is being produced, moves over the top surface of the feller device.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A felling attachment for sewing machines, provided with a scroll head whose lower edge has an essentially horizontal, outwardly projecting lip spaced from the inner end of the scroll to form a passage way for a piece of fabric to enter the head between the lip and the scroll proper, the said head being provided, in its curved portion and above the said passage way, with a longitudinal slot, arranged on the same side on which the said lip projects to permit another piece of fabric to enter the scroll head above the said passage way, substantially as and for the purpose set forth.

JOSEPH W. BETZ.

Witnesses:

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