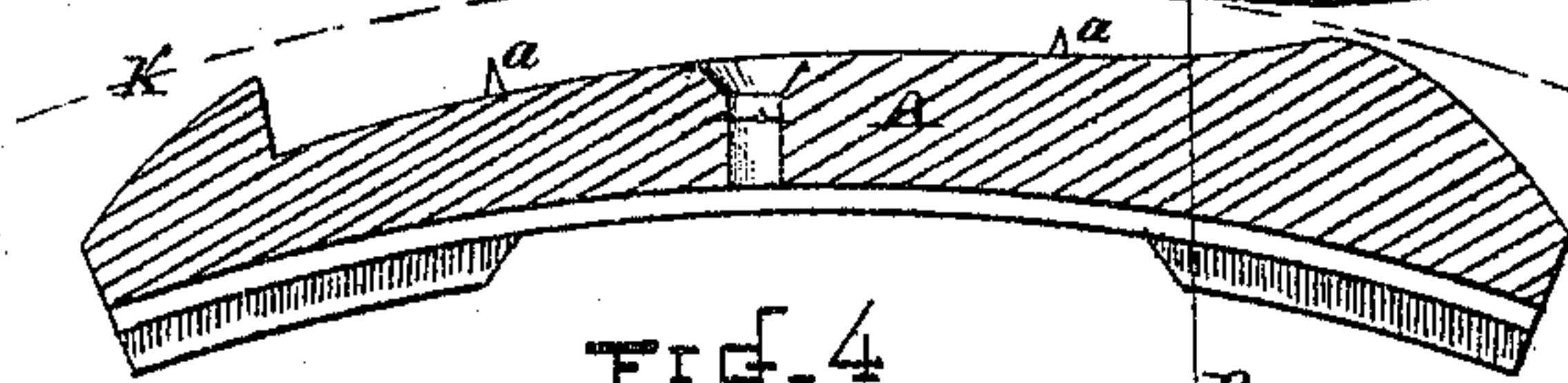
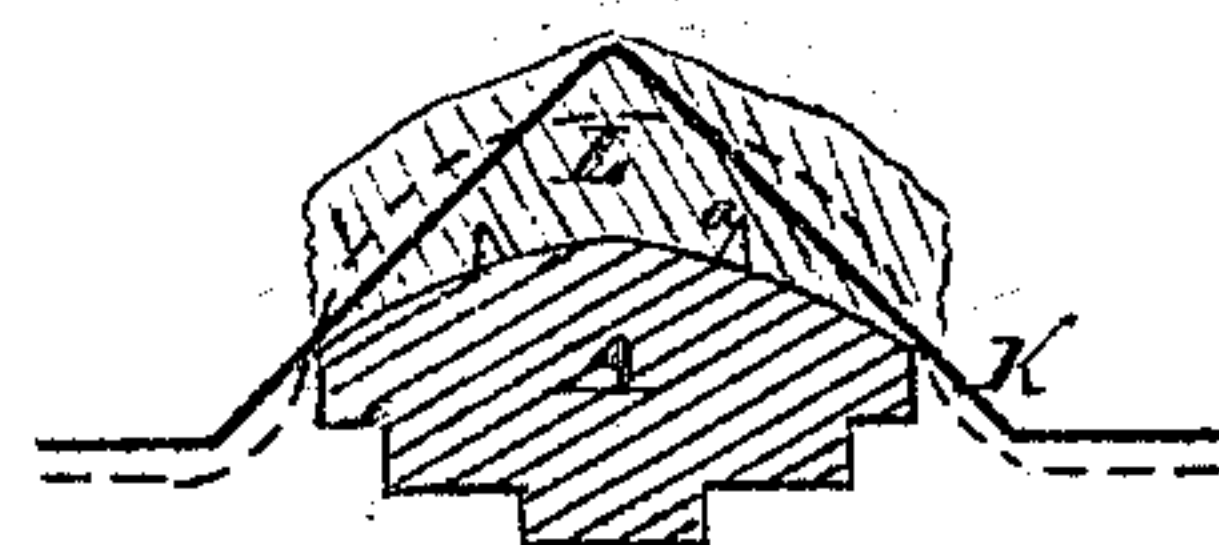
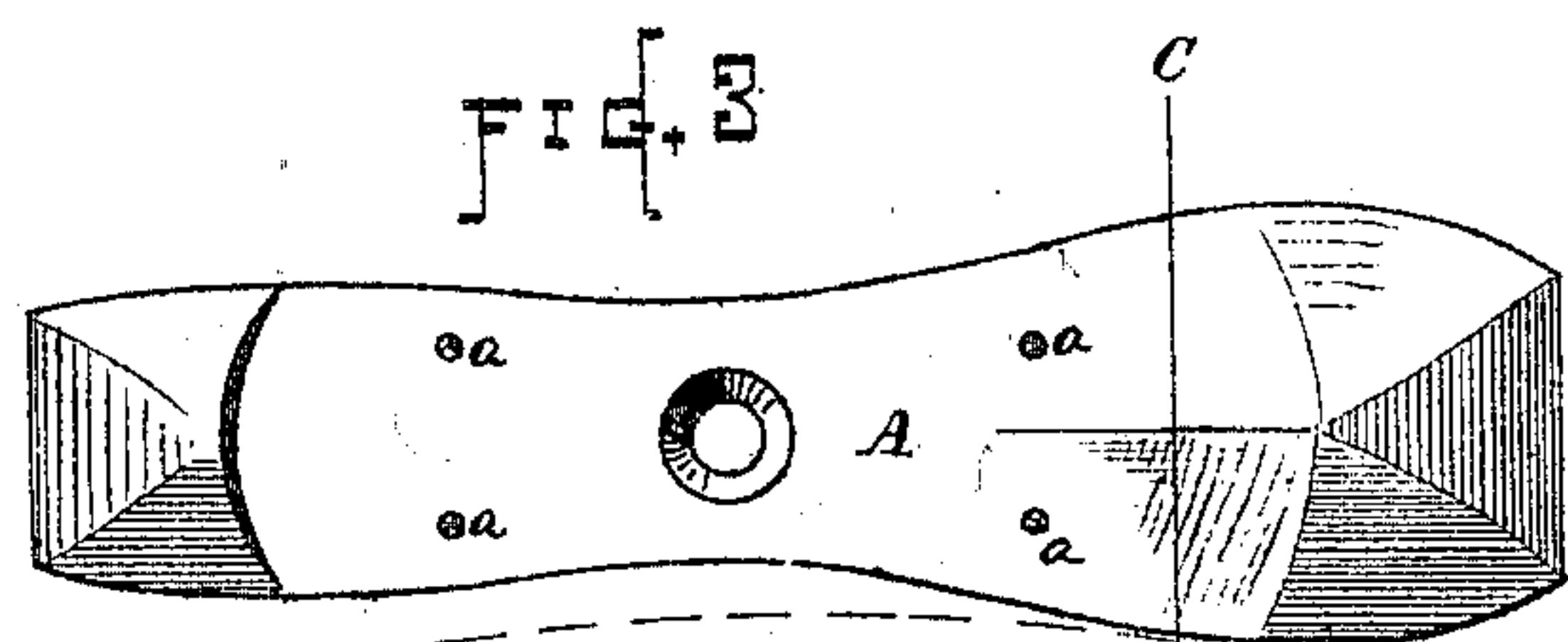
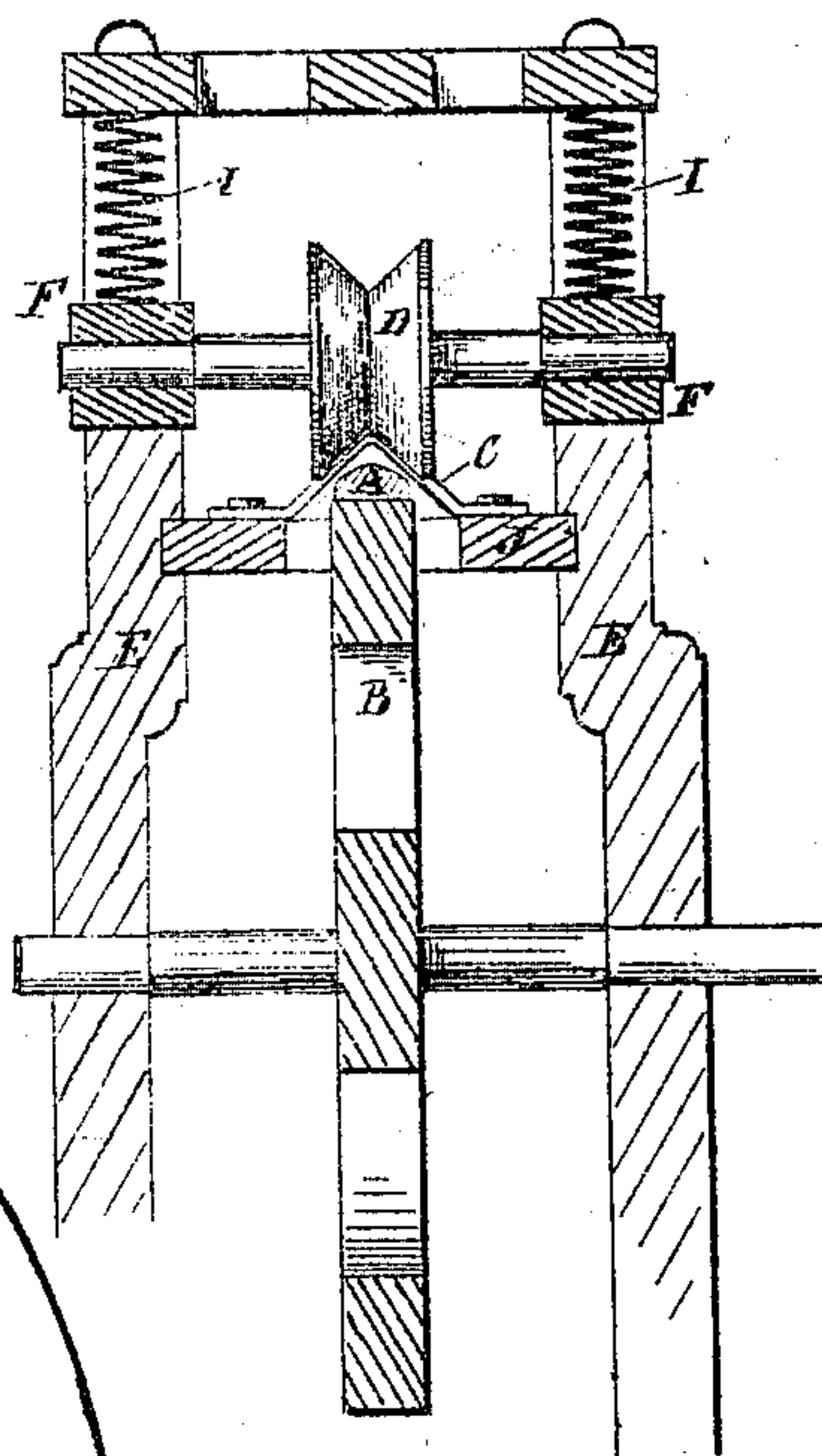
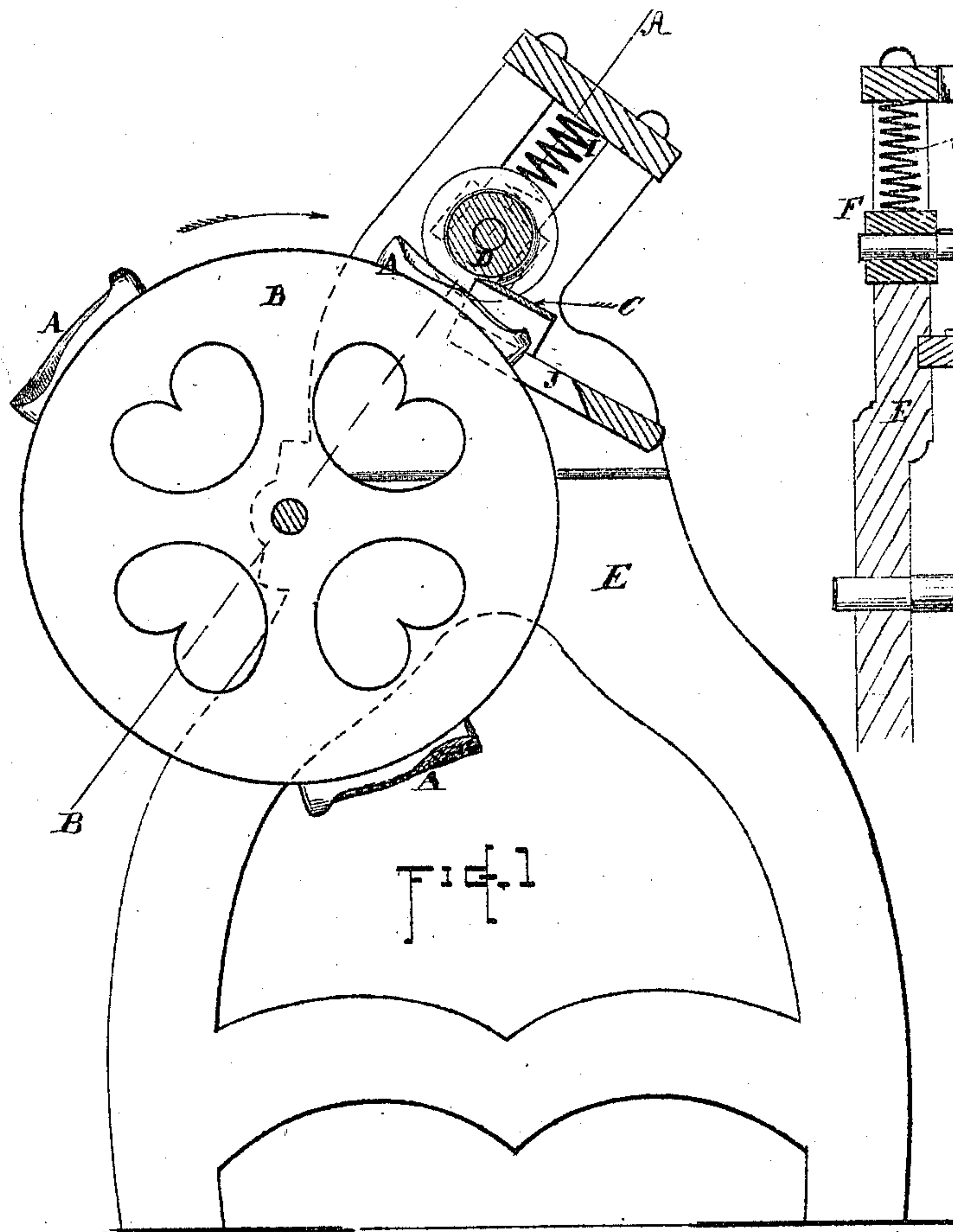


C. H. BLAKE, D. D. BLAKE, & F. M. BLAKE.
 Machine for Making Shank-Pieces for Boots and Shoes.
 No. 134,584. Patented Jan. 7, 1873.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES H. BLAKE, DAVID D. BLAKE, AND FRANCIS M. BLAKE, OF
WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING SHANK-PIECES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 134,584, dated January 7, 1873.

To all whom it may concern:

Be it known that we, CHARLES H. BLAKE, DAVID D. BLAKE, and FRANCIS M. BLAKE, all of the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Machines for Making Shank-Pieces for Boots and Shoes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 represents a vertical section of a shank-making machine embracing our improvements; Fig. 2 represents a transverse section of the machine at the position indicated by line A B, Fig. 1; Fig. 3 represents, on a somewhat enlarged scale, a face view of the form or shaping die; Fig. 4 represents a longitudinal section of the form or die; and Fig. 5 represents a transverse section of the form, illustrating the manner of trimming the shank-pieces.

The object of this invention is to provide a machine for rapidly and conveniently imparting the proper form to leather shank-pieces, and thus prepare them for use in boots or shoes without further trimming or shaping. To that end our invention consists in the peculiarly-constructed form or die for giving shape to the shank-piece, and in the mechanism for trimming off the surplus stock, as hereinafter described.

In the drawing, the parts marked A represent the forms or dies, which, in the present instance, are made curved, as shown in Figs. 3 and 4, and are secured to the periphery of the die-wheel B, being attached thereto by screws or in any other suitable manner. C indicates the trimming-knife, which is made in angular form, as shown, and D indicates the pressure-roll, the face of which has an angular groove of a similar shape to the knife C, and, if desired, its face may also be corrugated or roughened to prevent it from slipping on the shank-pieces. The die-wheel B is mounted in bearings fixed to the frame E, while the pressure-roll D is mounted in bearings F which slide up and down in suitable guide-slots in the upper part of the frame, as indicated. The bearings F of roll D are held

down by means of springs I that give the desired pressure upon said roll. The trimming-knife C is secured to an adjustable slide, J, that moves in proper grooves or guide-ways on the frame E, so that said knife can be readily adjusted to the required position. The edge of the knife C is arranged as near as practical to the roll D so as to trim the shank-piece while it is held firmly to the form A by said roll.

As many forms or dies A may be attached to the wheel B as can be conveniently used, thereby rendering the machine rapid and effective in its work.

The shank-pieces are first cut from the leather in the required form of outline, and these pieces are then placed upon the forms A, where they are retained by the studs or points *a*, and, as the wheel B is revolved, they pass beneath the roll D and cutter C. The roll D presses down the edges of the shank-piece around the form A, and the cutter C removes all of the stock which projects beyond its line of cut, as illustrated in Fig. 5, wherein K indicates the line of cut and L the material of the shank-piece. The face of the form or die A is so shaped that the space between said face and the plane of the cutter will correspond with the shape required for the finished shank-piece, and which shape is imparted to said shank-piece by a single cut of the knife C as the form passes under the roll D and carries the shank against the knife, so that when the shank-piece is removed from the form A and flattened out it will be of the required shape to fit the boot or shoe without further trimming.

By bending the shank-pieces over the forms A in the manner described the leather is put under strain while trimming, and consequently cuts easier than it otherwise would, while all of the irregular curves and variations of thickness required for the shank-piece can be produced at a single cut and with a regular-shaped knife, said knife being made angular, as shown; or, if preferred, it may be made on a regular curve, as indicated by dotted lines in Fig. 5.

In lieu of making the forms or dies A curved and securing them to the periphery of the wheel B they may be made straight and

be attached to a sliding carriage to work back and forth beneath the grooved roll D and angular cutter C; and weights may be employed instead of the springs I for pressing down said roll. We prefer, however, the form and construction shown.

By the use of our improved shank-making machine shank-pieces can be formed very cheaply and rapidly, and with great uniformity of thickness and curvature.

The die-wheel B may be arranged to operate by power or by hand, as preferred, and the shaft of the roll D may be geared to the shaft of the die-wheel, if desired, so that the two will move together with a positive motion.

Having described our improved machine for making shank-pieces, what we claim therein as new and of our invention, and desire to secure by Letters Patent, is—

1. The die or form A constructed to impart the proper shape to a shank-piece, when said shank-piece is bent over said form and trimmed by a single cut of an angular or curved knife, substantially as set forth.

2. The combination, with the form A, of the grooved faced pressure-roll D and trimming-knife C, substantially as and for the purposes set forth.

3. The combination, with the wheel B and dies or forms A, of the pressure-roll D, springs I, cutter C, and adjusting-slide J, substantially as and for the purposes set forth.

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