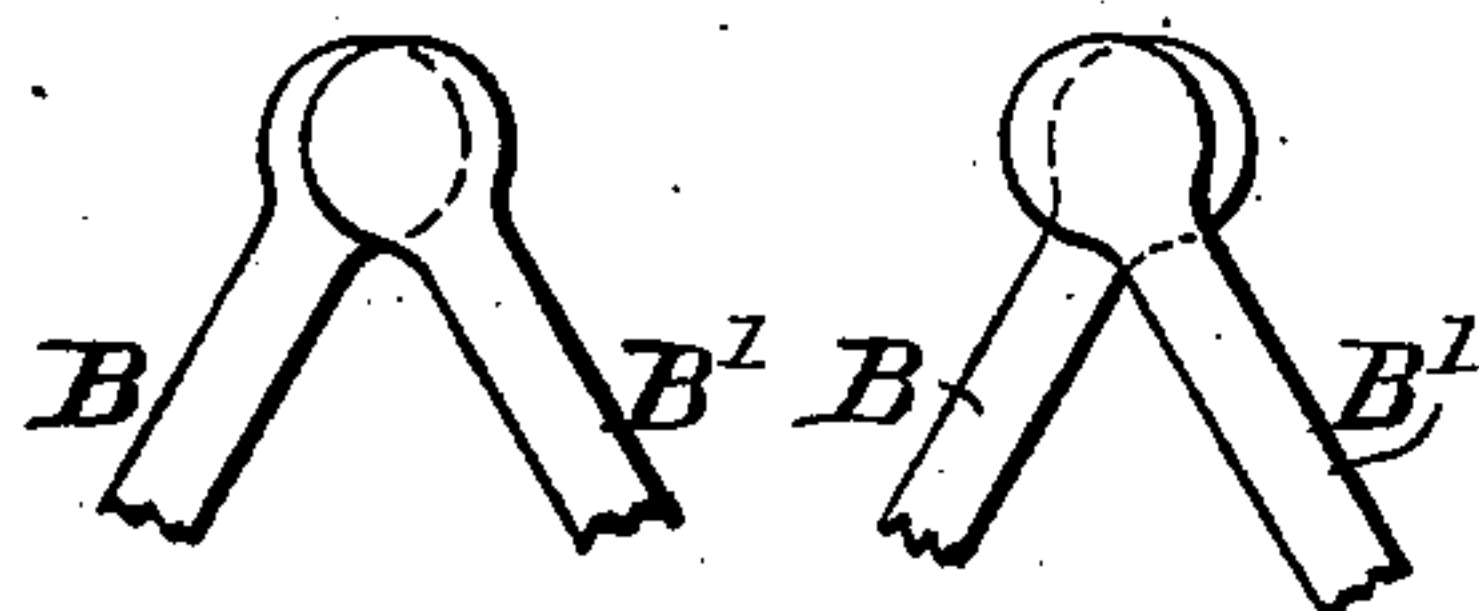
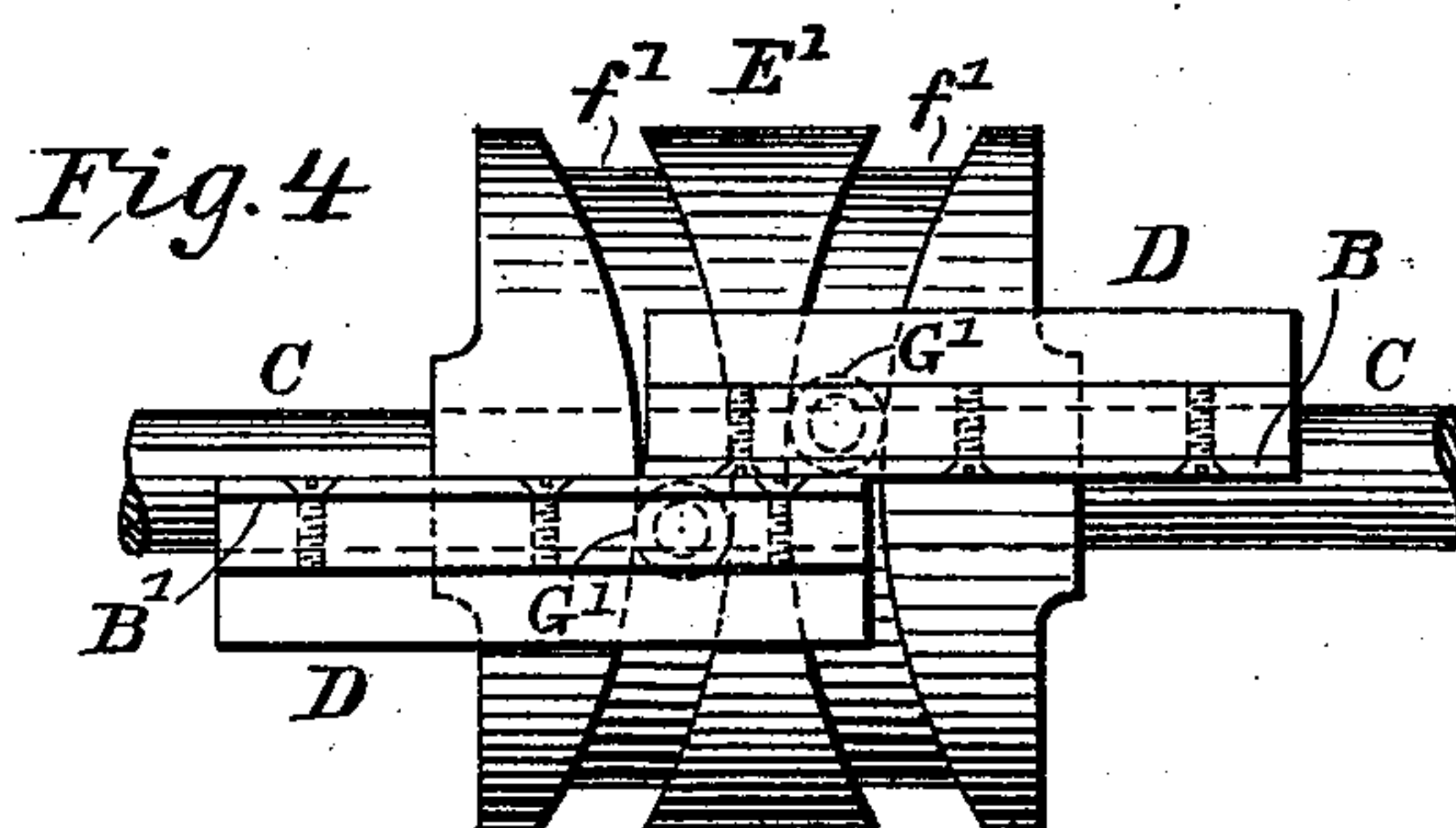
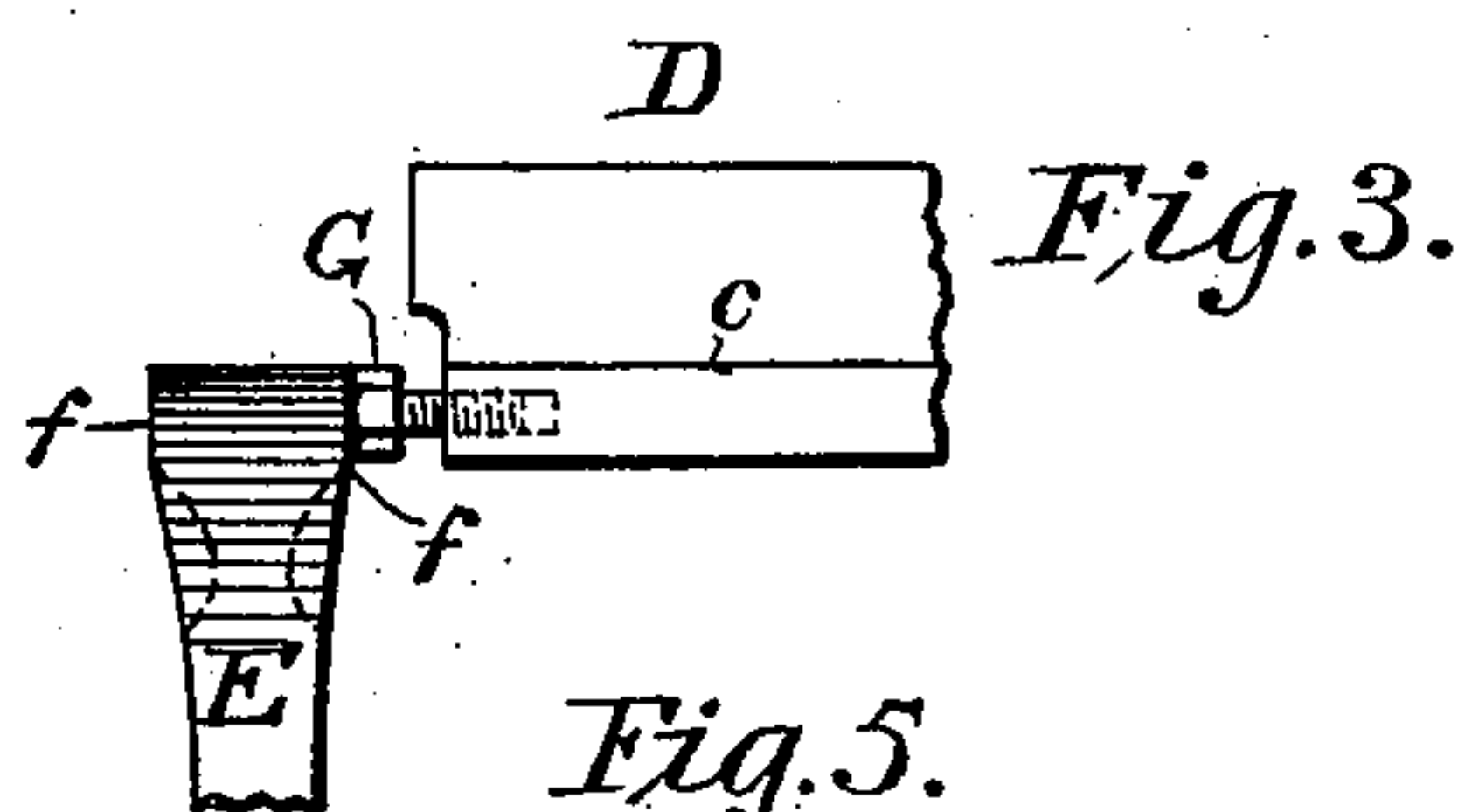
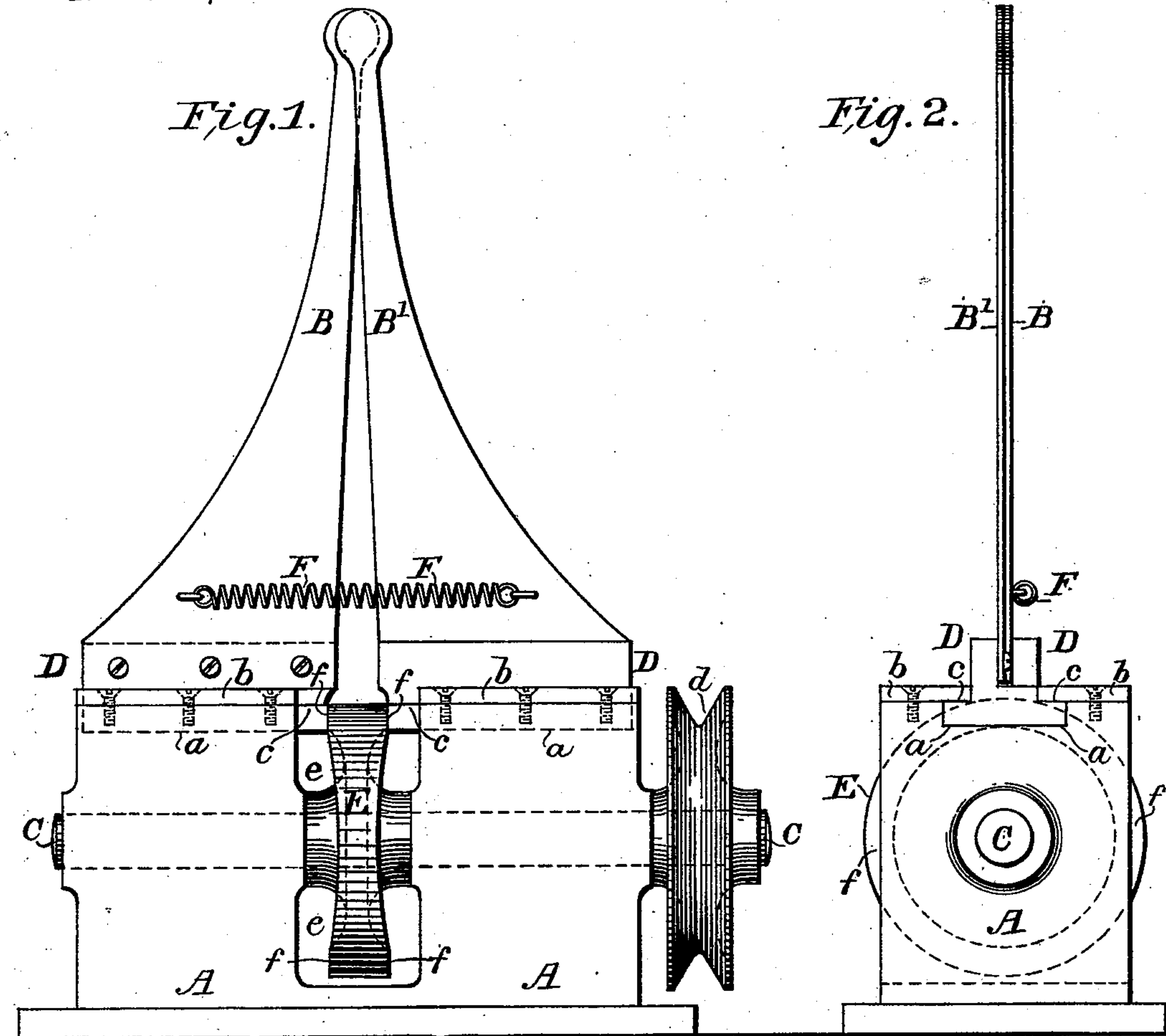


(No Model.)

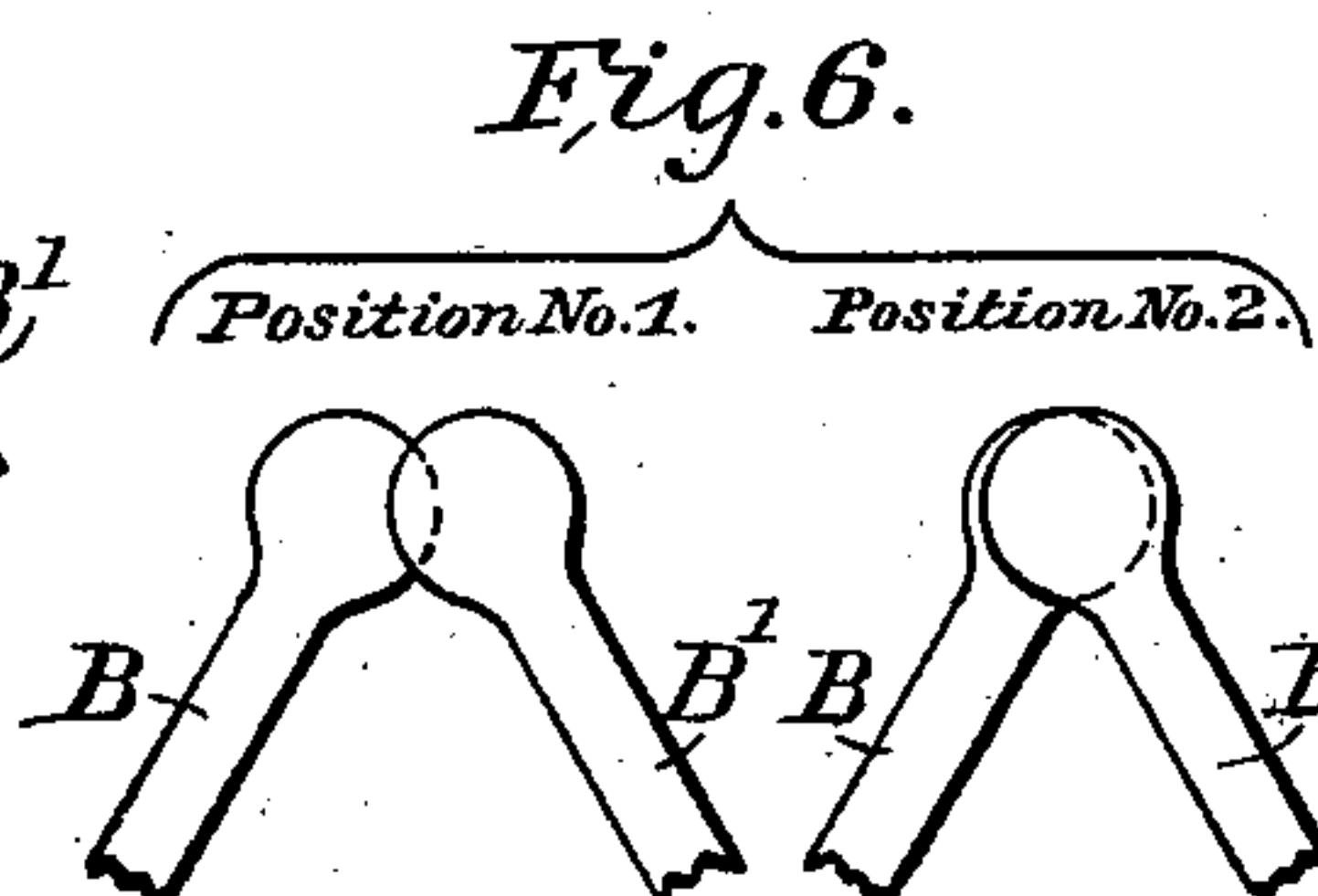
Q. W. BOOTH.
TURNING MACHINE.

No. 534,421.

Patented Feb. 19, 1895.



Witnesses
Jos. S. Loring
Carlton E. Snell



Inventor

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UNITED STATES PATENT OFFICE.

QUENTIN W. BOOTH, OF ROCHESTER, NEW YORK.

TURNING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,421, dated February 19, 1895.

Application filed May 20, 1893. Serial No. 474,887. (No model.)

To all whom it may concern:

Be it known that I, QUENTIN W. BOOTH, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Turning-Machines, of which the following is a specification.

This invention relates to that class of turning machines (also called "beading" machines) wherein the turning blade, finger, iron, or "turner," has a rapid spreading movement, the main object in view being to turn, spread, stretch out and smooth a seam, and particularly the scallops of a shoe upper.

The present invention consists primarily in providing such a machine with a laterally reciprocating turner or spreader which moves in a rectilinear path. With this rectilinearly-reciprocating turner is preferably and usually employed a second turner, which may be stationary or may have any of the movements now known in the art, that is to say, it may move vertically or longitudinally, it may swing on a pivot, it may have a combined longitudinal and lateral movement, it may have a rotary movement continuously in the same direction, or it may have an oscillatory rotary movement, but preferably this second turner has also a rectilinearly-reciprocating movement.

The present improvements in their preferred embodiment are illustrated in the accompanying drawings, wherein—

Figure 1, is a front view of the improved turning machine having two rectilinearly-reciprocating turners. Fig. 2, is a side view thereof. Fig. 3, is a detail view showing means for adjusting the turners. Fig. 4, is a plan view of a modification of the operating mechanism. Figs. 5, and 6, are diagrams illustrating the movement of the turners.

Referring first to Figs. 1 and 2, A, is a suitable framework, standard or support, upon which the movable mechanism is mounted. B, B', are the two rectilinearly-reciprocating turners, and C, is the drive-shaft.

Each of the turners B, B', is a flat blade or iron sufficiently thin at its upper or working portion to enable the two turners, if they lie side by side as shown, to enter between a piece of material and its lining. The turners are or may be of the same thickness throughout, but by preference, and as shown, each

turner is much wider at its base than at its working end. At its working end each turner should be of no greater width than will enable it to fit within the scallop of a shoe-upper with considerable play, but it is widened at its base so as to be rigid and firm in the direction in which it is subjected to strain. At its base each turner is rigidly secured to a slide D, which slides in a rectilinear path in a rectilinear way formed by a groove *a* in the support A and by guide plates *b b* screwed to the support A which overlap side flanges *c c* on the slides D.

The drive-shaft C has a drive pulley *d*, and a central cam-block E which is located in a vertical open slot *e* in the support A. The lower ends of the turners B, B, and their respective slides D, D, are separated and lie on opposite sides of the cam-block E. The cam-block E, rotates in a plane perpendicular to the rectilinear paths of the slides D, D, and has on its opposite sides cam-faces *f f* against which the inner ends of the slides D, D, respectively are held by a spring F. Consequently, when the shaft is rotated the turners are moved oppositely to each other in rectilinear paths. Preferably the turners move rapidly, say at the rate of twelve hundred reciprocations a minute.

Preferably, as shown, but not necessarily, the working ends of the turners overlap each other and lie face to face and closely adjacent to each other. In moving, each turner may move from one side to the other of the second turner so as to pass beyond its side edges in both directions, that is to say, the turners may move from position No. 1, to position No. 2, as shown in the diagram Fig. 5; or, on the other hand, the turners may be so adjusted that one never passes by and beyond the farther edge of the other, that is to say, they may be so arranged that the extremities of their movements in opposite directions are such as are illustrated in positions Nos. 1 and 2, of the diagram Fig. 6. For adjusting the turner for this purpose, each slide D, has an adjustable stud G (see Fig. 3) consisting of a screw tapping into the slide D whose head bears against the adjacent cam-face *f*.

In the modification shown in Fig. 4, a cam-block E', having peripheral cam-grooves *f'*, replaces the cam-block E having side cam-

faces *ff* of the construction shown in Figs. 1, 2, and 3. Co-operating with the cam-grooves *f', f'*, are friction bowls *G', G'* carried by the slides *D, D*, respectively. In this modification also, the cam-block rotates in a plane perpendicular to the line of movement of the turners.

I claim as my invention—

1. In a turning machine, the combination of a support having a rectilinear guide-way, a slide sliding therein, and a turner carried by said slide and extending perpendicularly therefrom so that its outer working edge moves laterally in a path parallel with the path of the slide, and means for imparting a rapid reciprocation to said slide, substantially as set forth.

2. A support having a rectilinear guide-way, and a rotating cam-block rotating in a plane perpendicular to said guide way, in combination with a slide co-operating with said

cam-block and sliding in said guide-way, and a turner carried by said slide, substantially as set forth.

3. A support having a central slot, two rectilinear guide-ways on opposite sides of said slot, a rotating shaft mounted on said support, and a cam-block on said shaft located in said slot and having cam-faces on its sides, in combination with the two slides located and sliding in said guide-ways respectively, and a spring maintaining both slides in co-operative relation with the respective cam-faces of said cam-block, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

QUENTIN W. BOOTH.

Witnesses:

ROY C. WEBSTER,
EDWARD WEBSTER.