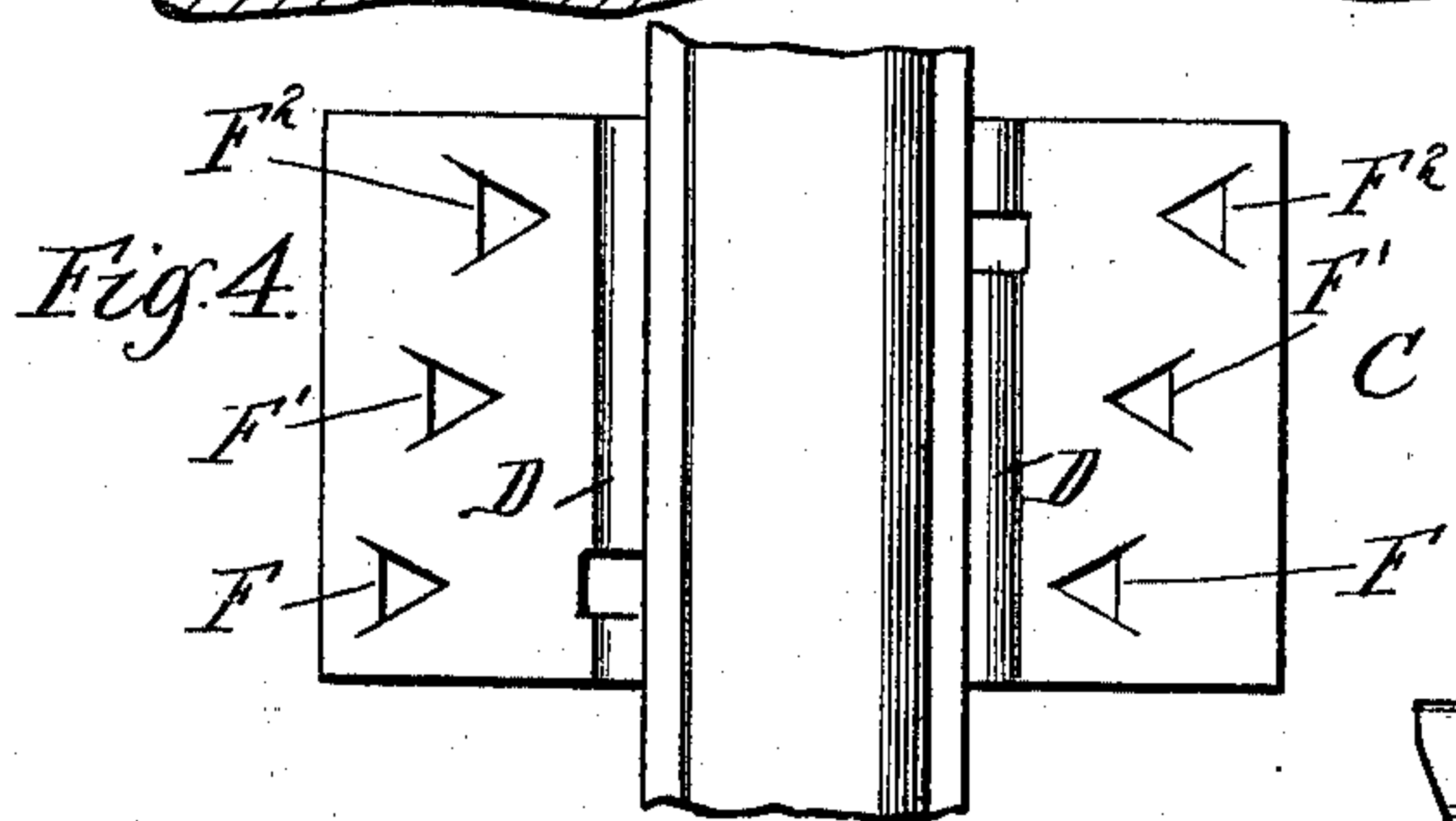
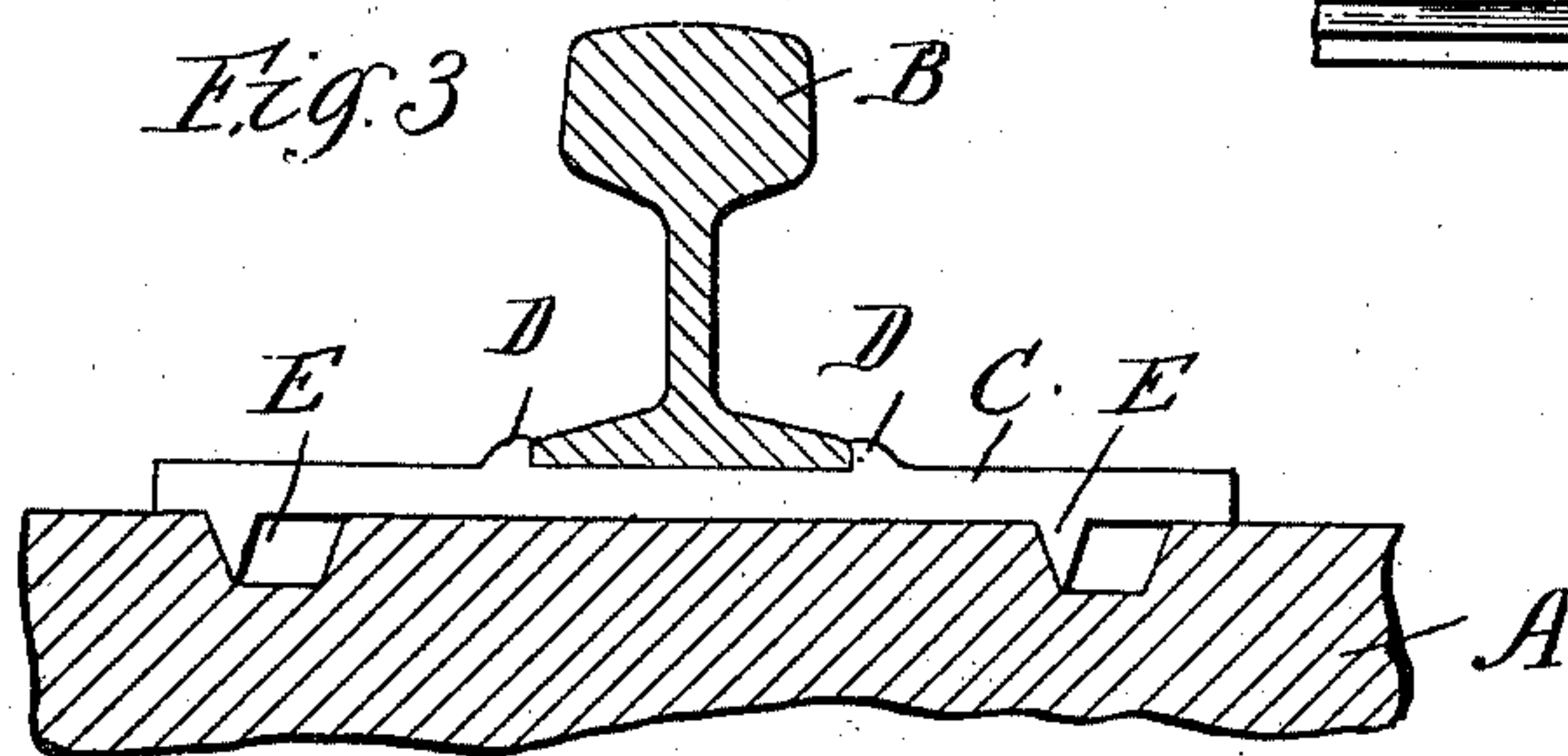
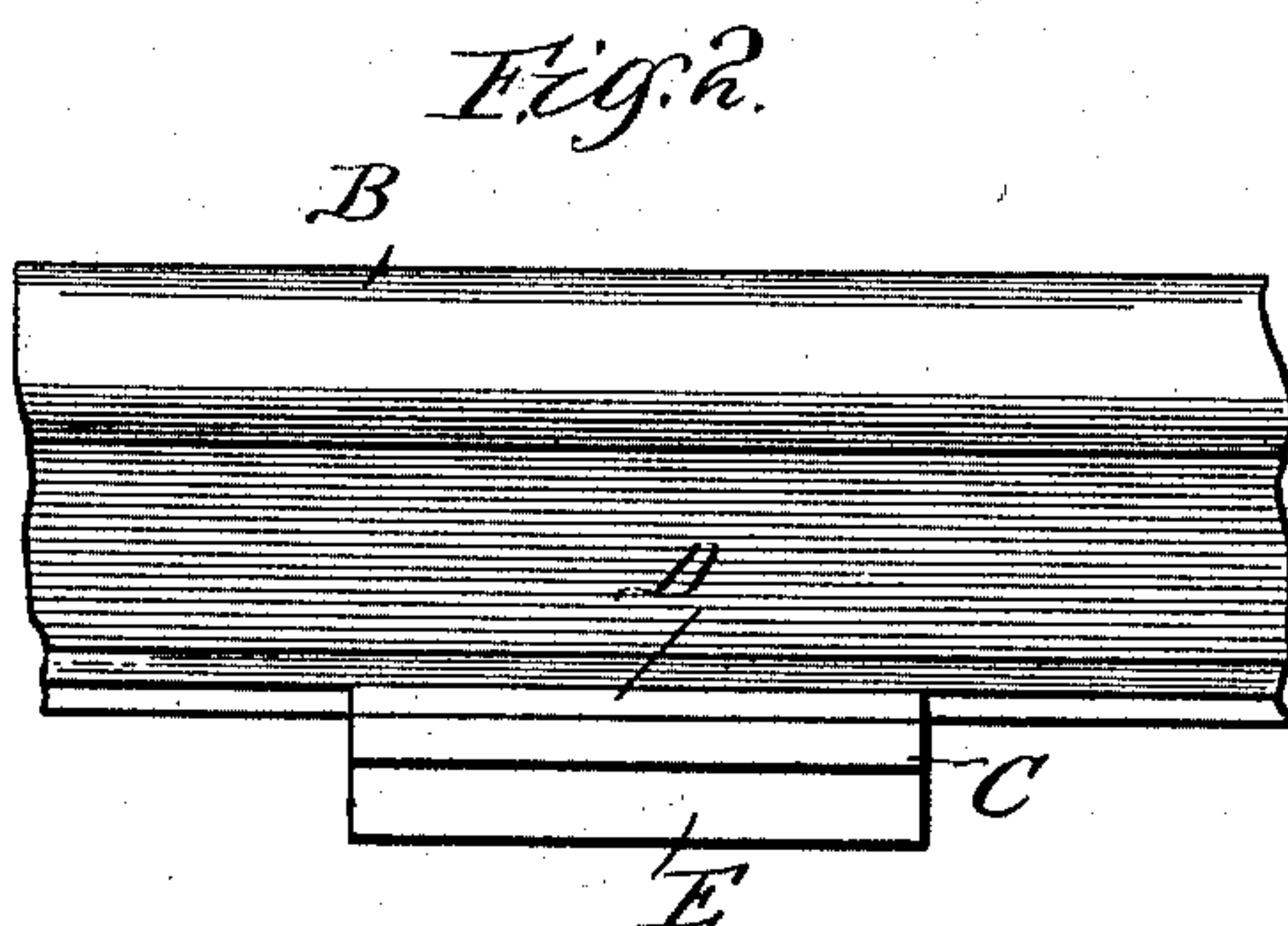
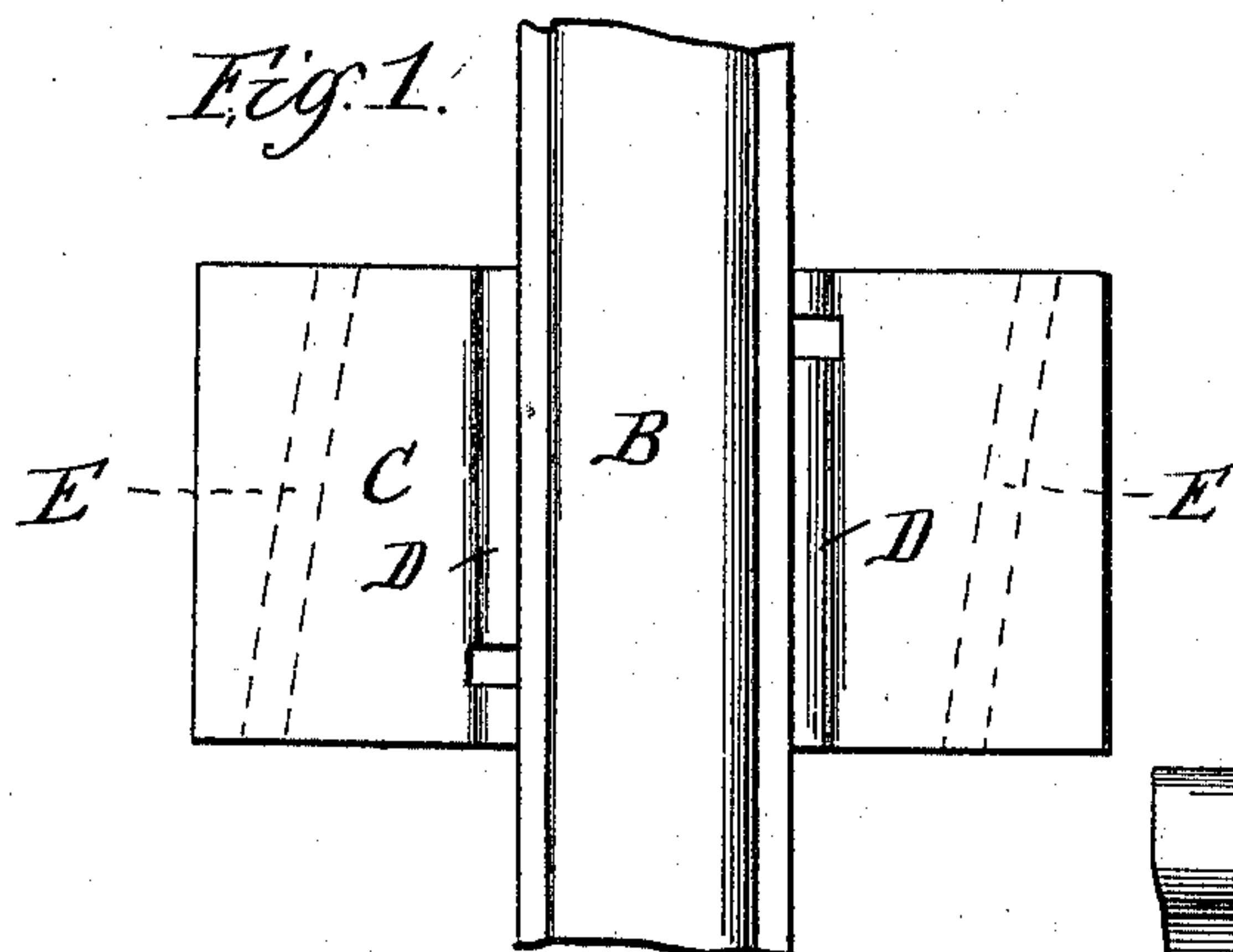


(No Model)

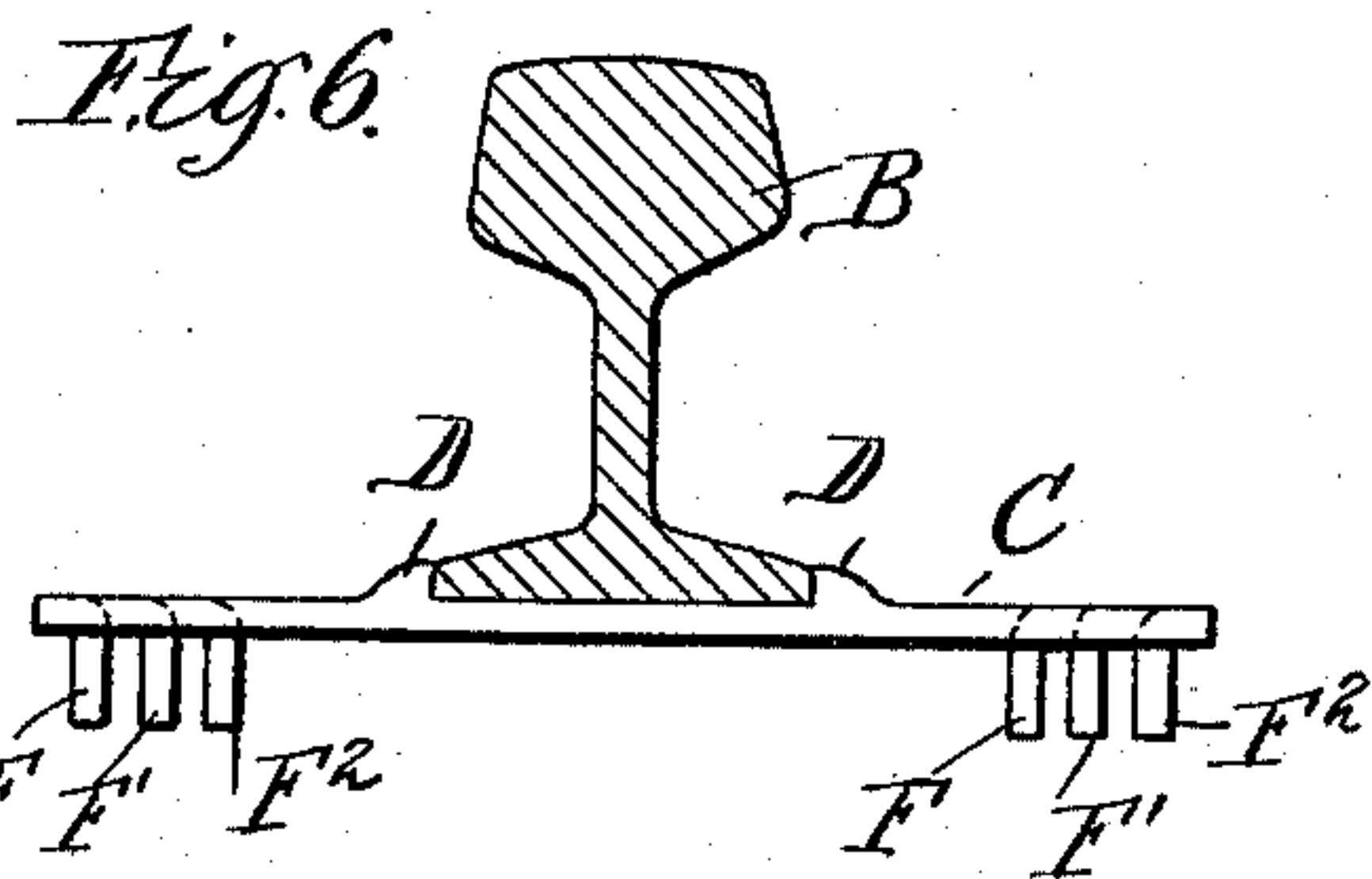
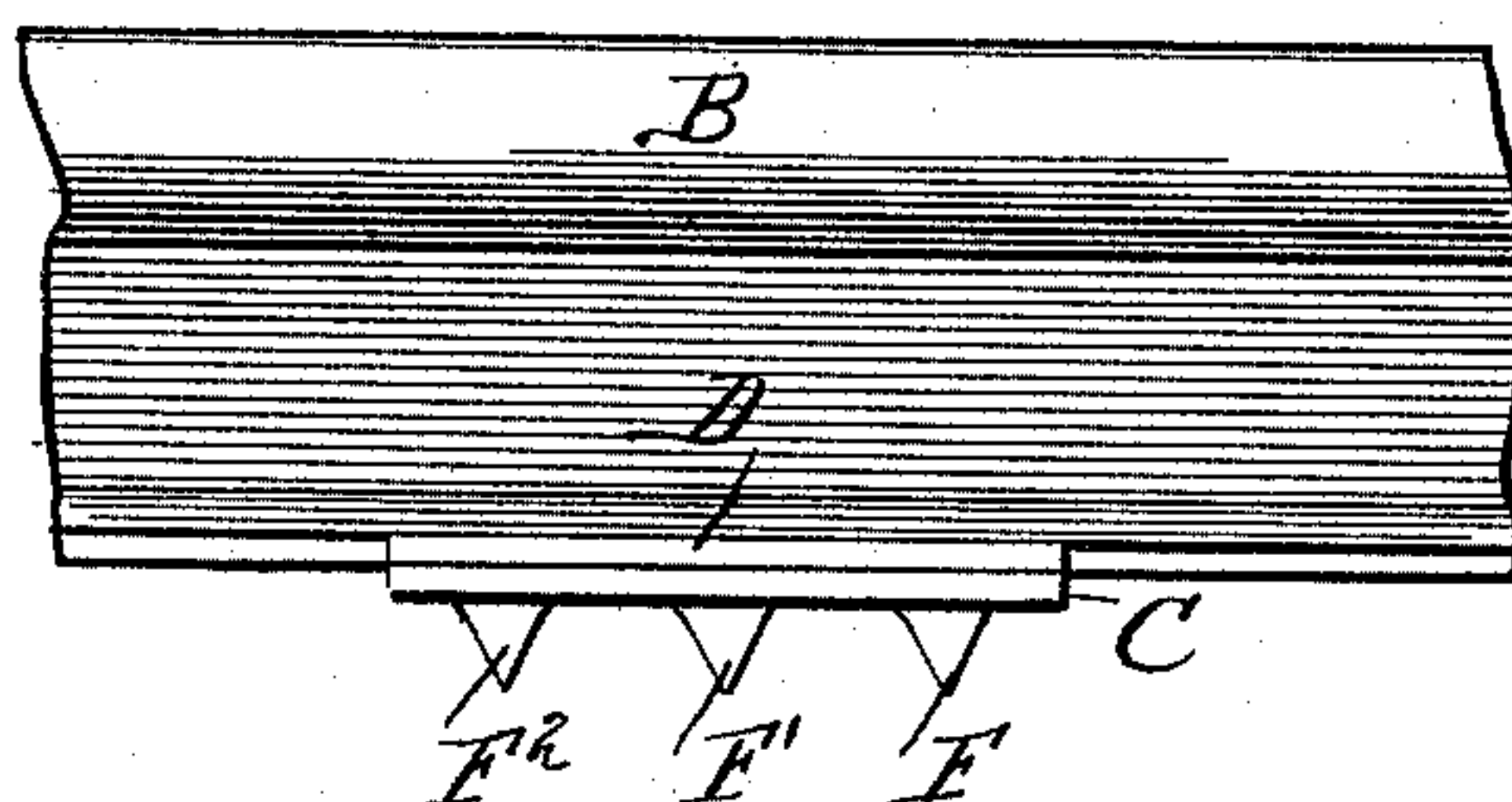
B. WOLHAUPTER.  
TIE PLATE.

No. 584,617.

Patented June 15, 1897.



*Fig. 5.*



Witnesses.

Wm. M. Rheem  
Wm. J. Huming

Inventor  
by Benjamin Wolhaupter  
Atty.



# UNITED STATES PATENT OFFICE.

BENJAMIN WOLHAUPTER, OF MORGAN PARK, ILLINOIS.

## TIE-PLATE.

SPECIFICATION forming part of Letters Patent No. 584,617, dated June 15, 1897.

Application filed March 13, 1895. Serial No. 541,522. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN WOLHAUPTER, a subject of the Queen of Great Britain, residing at Morgan Park, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Tie-Plates; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the production of an adjustable tie-plate—that is, one which when the lateral thrusts of the rail have moved it along the tie, and thus widened the gage of the track, can by a slight shifting of its position be so adjusted as to return the rail to its normal position.

In a concurrently-pending application I have drawn attention very carefully to the advantages of an adjustable plate. The said concurrently-pending application relates more particularly, although not entirely, to a plate wherein the under flanges extend parallel with the grain of the tie.

The present application relates more particularly to that class of plates wherein the flanges extend across the grain of the tie.

In the drawings, Figure 1 is a plan view of the rail and my plate. Fig. 2 is an edge elevation of the plate. Fig. 3 is an edge elevation at right angles to Fig. 2. Figs. 4, 5, and 6 are plan and edge elevations, respectively, of a variation.

In carrying out the invention, A represents the tie, B the rail, and C the tie-plate. On the upper side of the plate are the ridges D, forming the rail-abutments. There may be either one or two of these ridges, as desired. On the under side the ridges may be formed in various ways and yet carry out the purpose of my invention. In Fig. 1 I have shown continuous ridges E, extending substantially at right angles to the grain of the tie, so that when placed upon the tie the ridges cut across the fiber. Instead of making these under flanges exactly parallel with the top flange or flanges, as has heretofore been the case, I make them parallel with each other, but on a diagonal line with respect to the top flange or to the rail-flange. Now, as will be seen,

when the lateral thrust of the rail has caused the flanges E to compress that fiber against which these flanges bear, and thus allowed the plate and rail to shift, by withdrawing the spikes and shifting the plate across the tie, or, in other words, in a direction substantially parallel with the rail, the plate will, by virtue of the inclined or diagonal position of the under flanges, be shifted at the same time against the rail and will carry the latter back to its normal position, thus restoring the track to the proper gage. The spikes are then re-driven and the largest portion of the under flanges rests against fiber that has once been compressed, thus making it much harder for the rail again to shift the plate out of position. Instead of continuous flanges on the under side, as in Fig. 2, I might make a series of points or projections F F' F<sup>2</sup>, arranged on a diagonal line, similar to the flanges E. In this latter case when the plate is shifted the point F is carried to the orifice or indentation originally made by the point F' and the point F' is carried to the orifice originally made by the point F<sup>2</sup>, while the latter makes a new orifice for itself.

It is obvious that instead of two flanges E or two sets of points F F' F<sup>2</sup> there might be only one flange E or one row of points and the object of my invention—i. e., to produce a plate capable of adjustment for the purpose of restoring the gage—still be attained.

It will be observed that in each of the above cases the flanges or points or the engaging devices extend across the grain of the tie and on a diagonal line with respect to the rail-flange.

What I claim is—

1. A railway-tie plate provided on its under side with a tie-engaging device or devices extending across the grain of the tie and arranged on a regular diagonal line with respect to the rail and at varying distances therefrom, substantially as described.

2. A railway-tie plate provided on its under side with a tie-engaging device extending across the grain of the tie and arranged on a regular diagonal line with respect to the rail and at varying distances therefrom, and at its upper side with one or more rail-abutments, substantially as described.

3. A railway-tie plate provided with a sin-

gle projection only on its under side, said projection being a ridge extending across the grain of the tie and on a diagonal line with respect to the rail so that it will form an acute angle with the rail, substantially as described.

5 4. A railway-tie plate provided on its under side with two or more ridges extending across the grain of the tie said ridges extending in parallel planes and arranged on a diagonal line with respect to the rail so that  
10 each will form an acute angle with the rail, substantially as described.

5. A railway-tie plate provided with a sin-

gle projection only on its under side, said projection being a ridge extending across the grain of the tie and on a diagonal line with respect to the rail so that it will form an acute angle with the rail, and said plate provided on its upper side with one or more rail-abutments, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

BENJAMIN WOLHAUPTER.

Witnesses:

WALTER H. CHAMBERLIN,  
FLORENCE EMBREY.