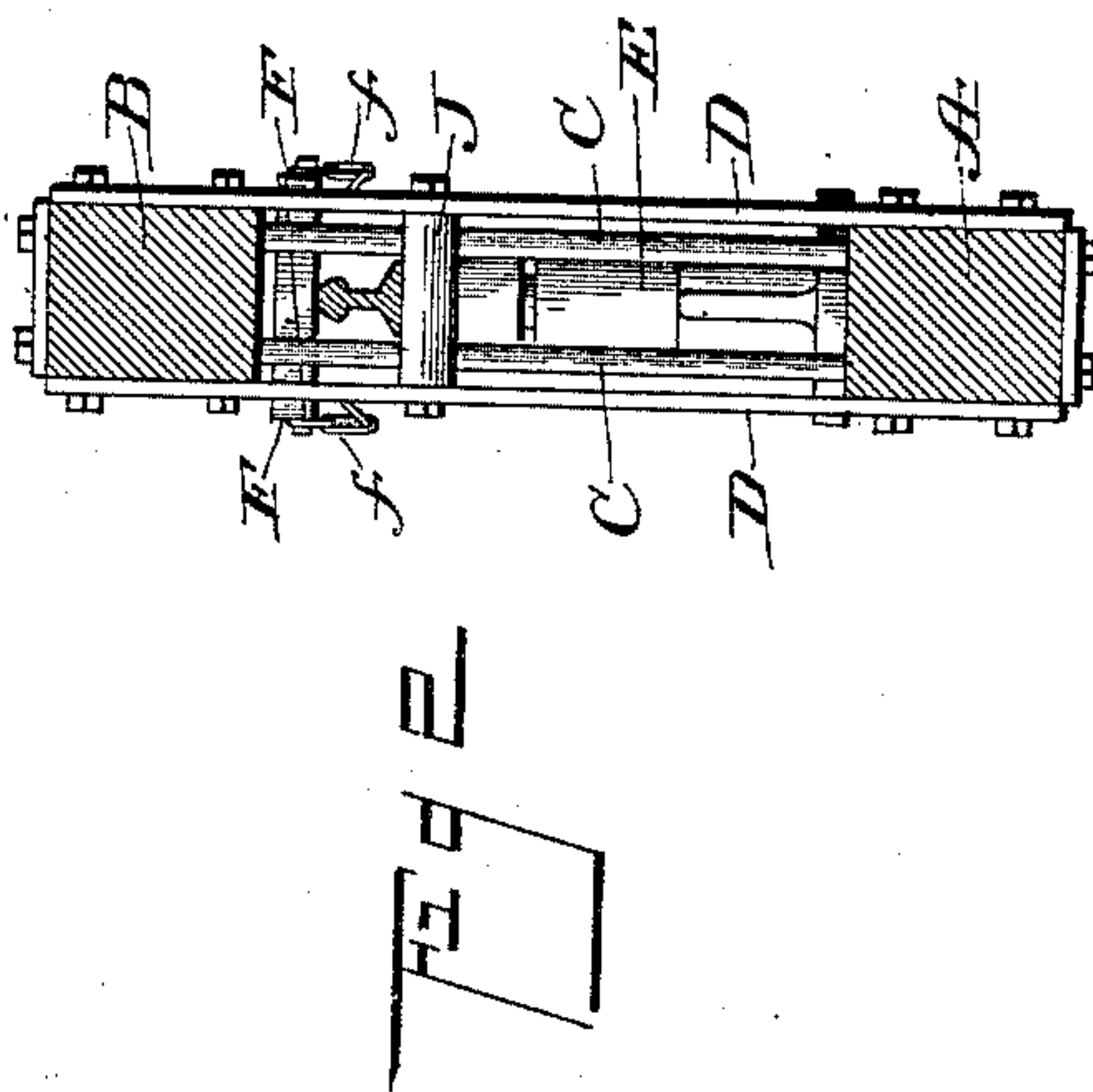
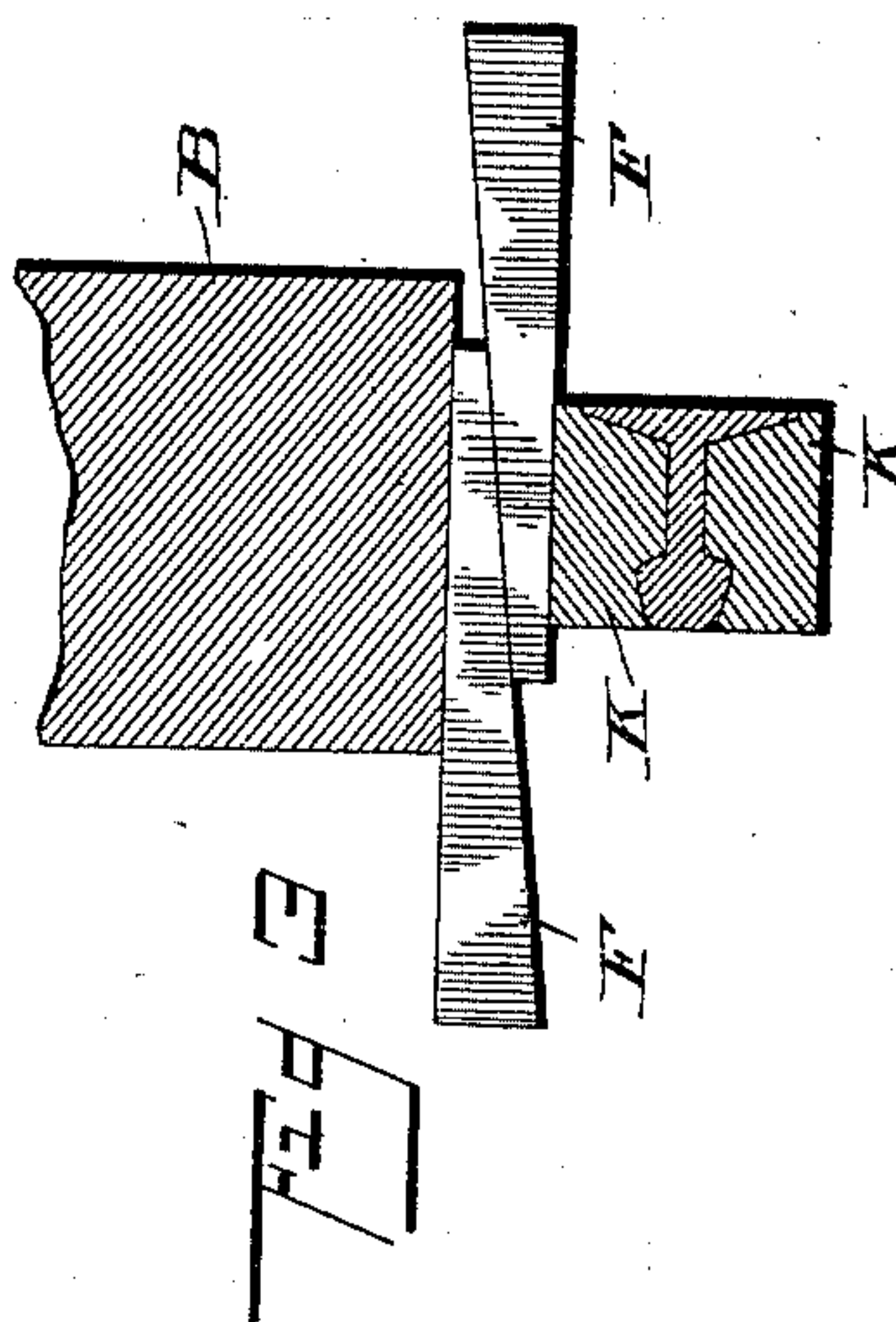
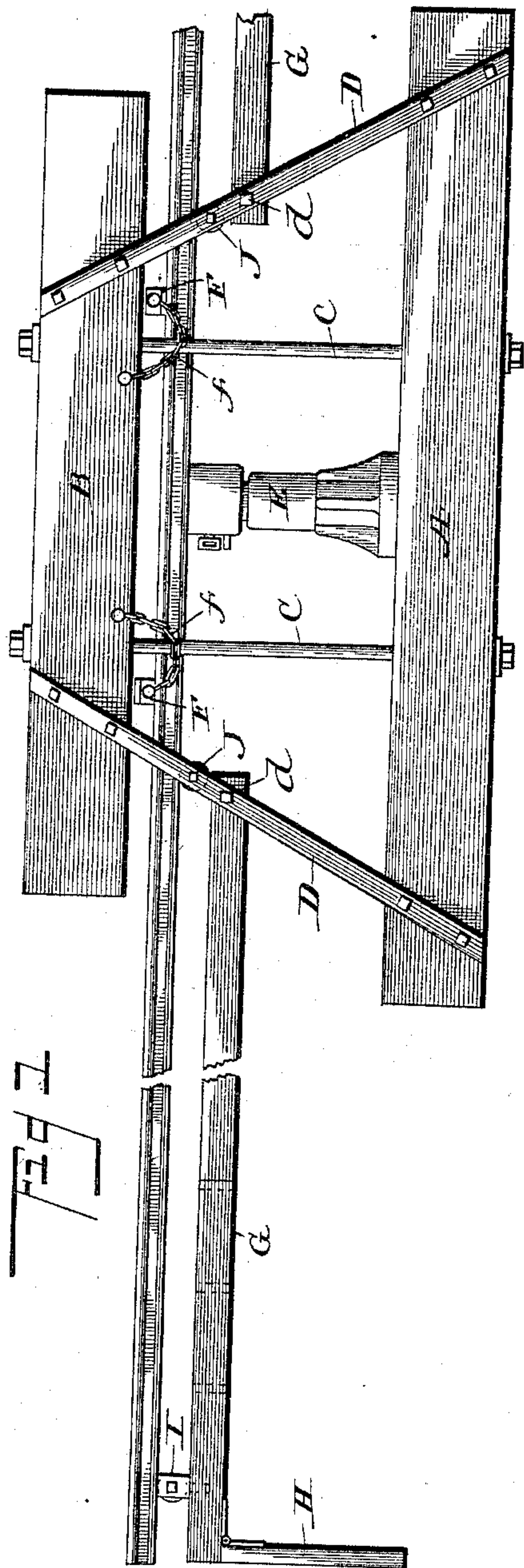


(No Model.)

E. Y. MARSHALL.  
RAILWAY RAIL STRAIGHTENING MACHINE.

No. 485,768.

Patented Nov. 8, 1892.



Witnesses  
John J. J. J. J.  
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# UNITED STATES PATENT OFFICE.

EDGAR Y. MARSHALL, OF GARDEN CITY, KANSAS.

## RAILWAY-RAIL-STRAIGHTENING MACHINE.

SPECIFICATION forming part of Letters Patent No. 485,768, dated November 8, 1892.

Application filed August 25, 1892. Serial No. 444,059. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR Y. MARSHALL, a citizen of the United States, residing at Garden City, in the county of Finney and State of Kansas, have invented certain new and useful Improvements in Railway-Rail-Straightening Machines; and I do hereby 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 appertains to make and use the same.

My invention relates to a new and improved machine for straightening railway-rails; and it consists in the novel construction and arrangement of parts hereinafter described, and afterward definitely pointed out in the claims, due reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a side elevation, partially broken away, of my improved machine; Fig. 2, an end view, partly in section; and Fig. 3, a detail sectional view showing the manner lateral bends in the rail are straightened out.

Referring to the drawings, the letter A indicates a heavy timber, which is designed to be embedded in the ground and constitutes the bed of the machine.

B indicates a similar timber located above the bed-timber A and rigidly connected therewith by means of vertical tie-rods C C and diagonal brace-bars D D.

E indicates a hydraulic jack resting upon the bed-timber A and under the top timber B.

F F indicate wedges, which are preferably secured to the top timber B by chains *ff*, to prevent them being lost or misplaced.

G G indicate platforms or tables, which are most conveniently formed of a single plank and at their inner ends are pivotally connected to the brace-bars D D by means of bolts *d d*. The tables at their outer ends are supported by means of hinged legs H H and are provided with feed-rolls I I, mounted in suitable bearings upon the upper sides of the tables G, and similar rolls J J are also mounted between the brace-bars D D.

The operation of my improved machine is as follows: The rail to be straightened is fed to the machine over the feed-rolls I and J until the bend lies over the hydraulic jack.

The wedges F F are next arranged between the rail and the under side of the top timber B, the wedges being superimposed one over the other, as shown in Fig. 2 of the drawings. The location of the wedges will be governed by the length of the bend in the rail, the longer the bend the farther apart are the wedges placed. The hydraulic jack is now operated, and as its piston ascends the bend in the rail is straightened out between the piston and the wedges. This operation has a tendency to depress the ends of the rails while it is being performed, and to permit of this the legs H H are turned under the tables G G and allow the latter to swing down upon their pivots. In this manner any surface bend that may occur in any of the heaviest steel rails manufactured can be quickly straightened out while the rails are cold. When lateral bends in the rails are to be straightened out, I employ blocks K K, which upon their inner face are of a contour to match or correspond with the shape of the rail. The rail is turned upon its side and fed to the machine, as before described, the blocks K K applied thereto, and the wedges inserted over the top block. The hydraulic jack now operates to straighten out the rail in the manner before described, the blocks K K serving to protect the rail from being crushed or injured.

What I claim is—

1. In a rail-straightening machine, the combination, with the bed-timber A and top timber B, rigidly connected together by tie-rods, of a hydraulic jack seated upon said bed-timber and adapted to bear against a rail placed under the top timber and wedges adapted to be arranged between the top timber and the rail, substantially as described.

2. In a rail-straightening machine, the combination, with the bed-timber A and top timber B, rigidly connected together by tie-rods, of the hydraulic jack seated upon the bed-timber, the wedges F F, the tables G G, pivotally secured at their inner ends to the machine and provided at their outer ends with hinged legs H H, and feed-rolls mounted in bearings on said platform, substantially as described, and for the purpose specified.

3. In a rail-straightening machine, the combination, with the bed-timber A and top tim-

ber B, rigidly connected together by vertical  
tie-rods C C and diagonal brace-bars D D, of  
the tables G G, pivotally secured to said brace-  
bars and provided with hinged legs H H, feed-  
5 rolls I I, mounted in bearings on said tables,  
feed-rolls J J, mounted in bearings in the  
brace-bars, a hydraulic jack seated upon the  
bed-timbers, and wedges adapted to be wedged

between the rail and top timber, substantially  
as described.

In testimony whereof I affix my signature in  
presence of two witnesses.

EDGAR Y. MARSHALL.

Witnesses:

JESSE TAYLOR,

FRANK B. APPERSON.