

(No Model.)

J. SHIPLEY.

RAIL JOINT.

No. 334,056.

FIG. 1.

Patented Jan. 12, 1886.

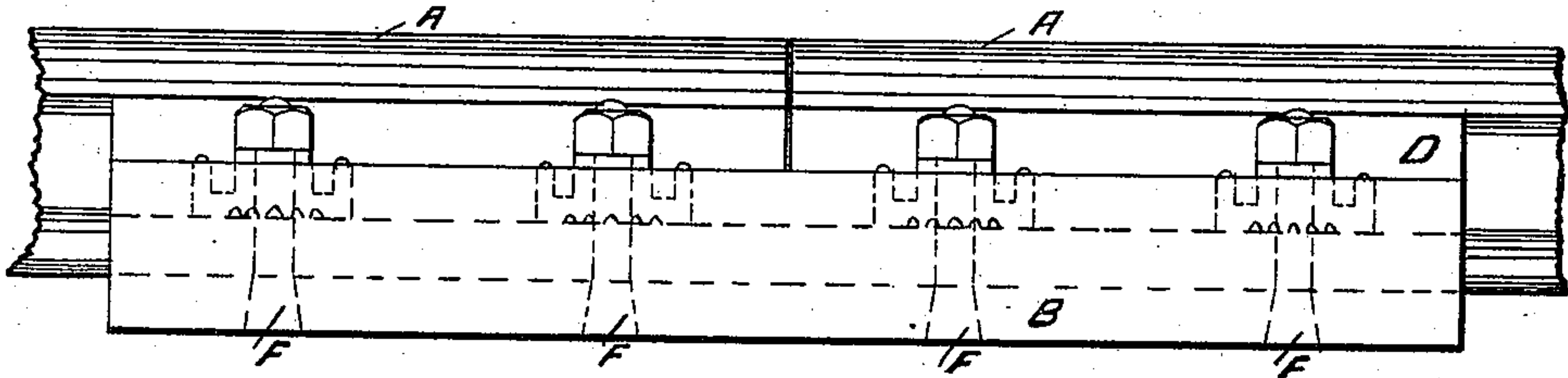


FIG. 2.

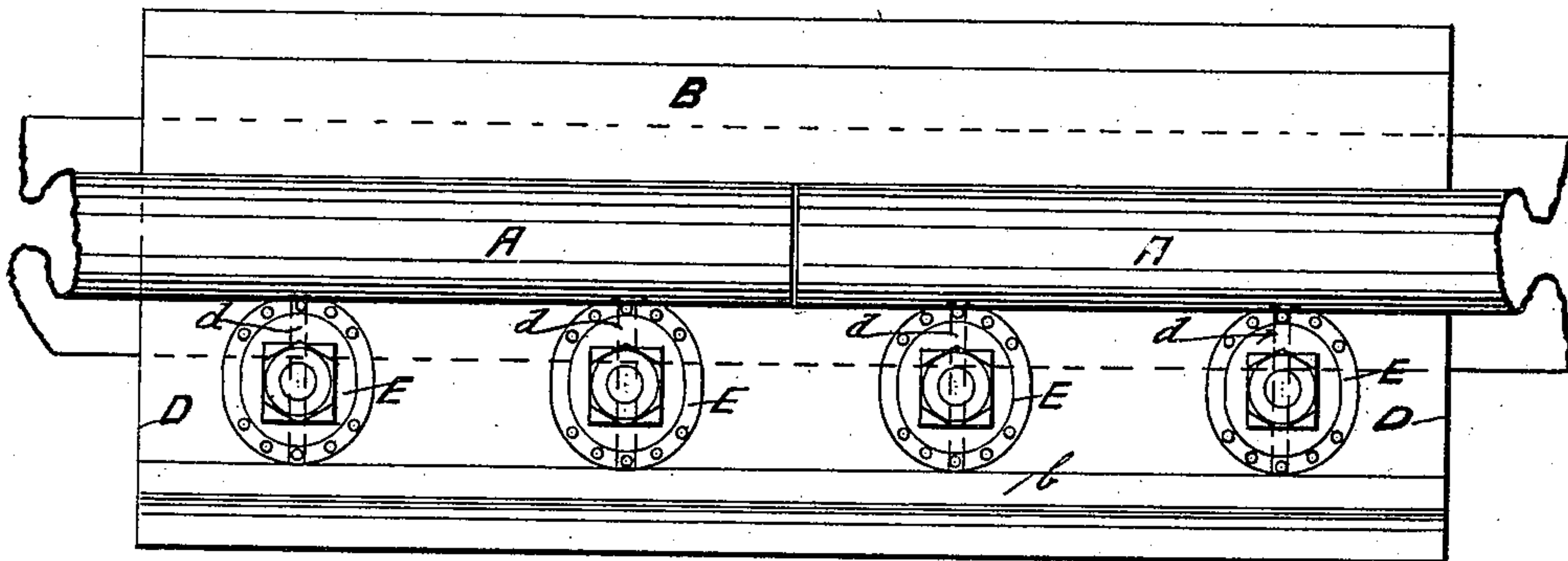


FIG. 3.

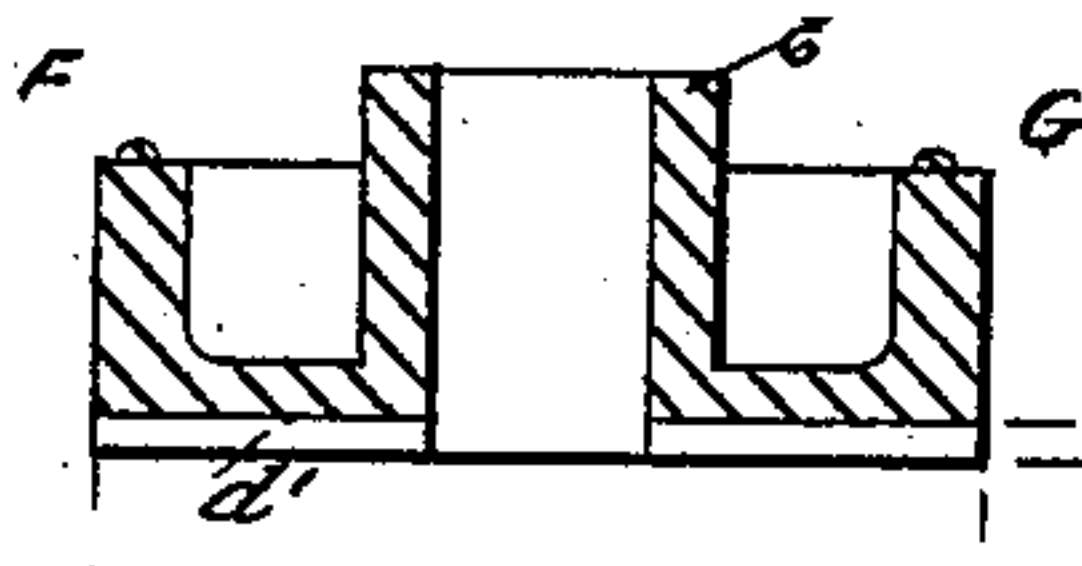


FIG. 5.

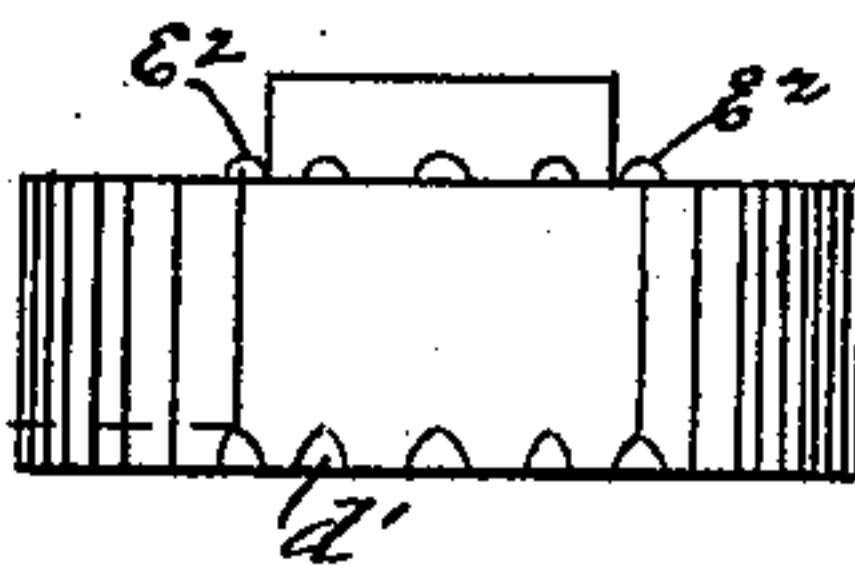


FIG. 4.

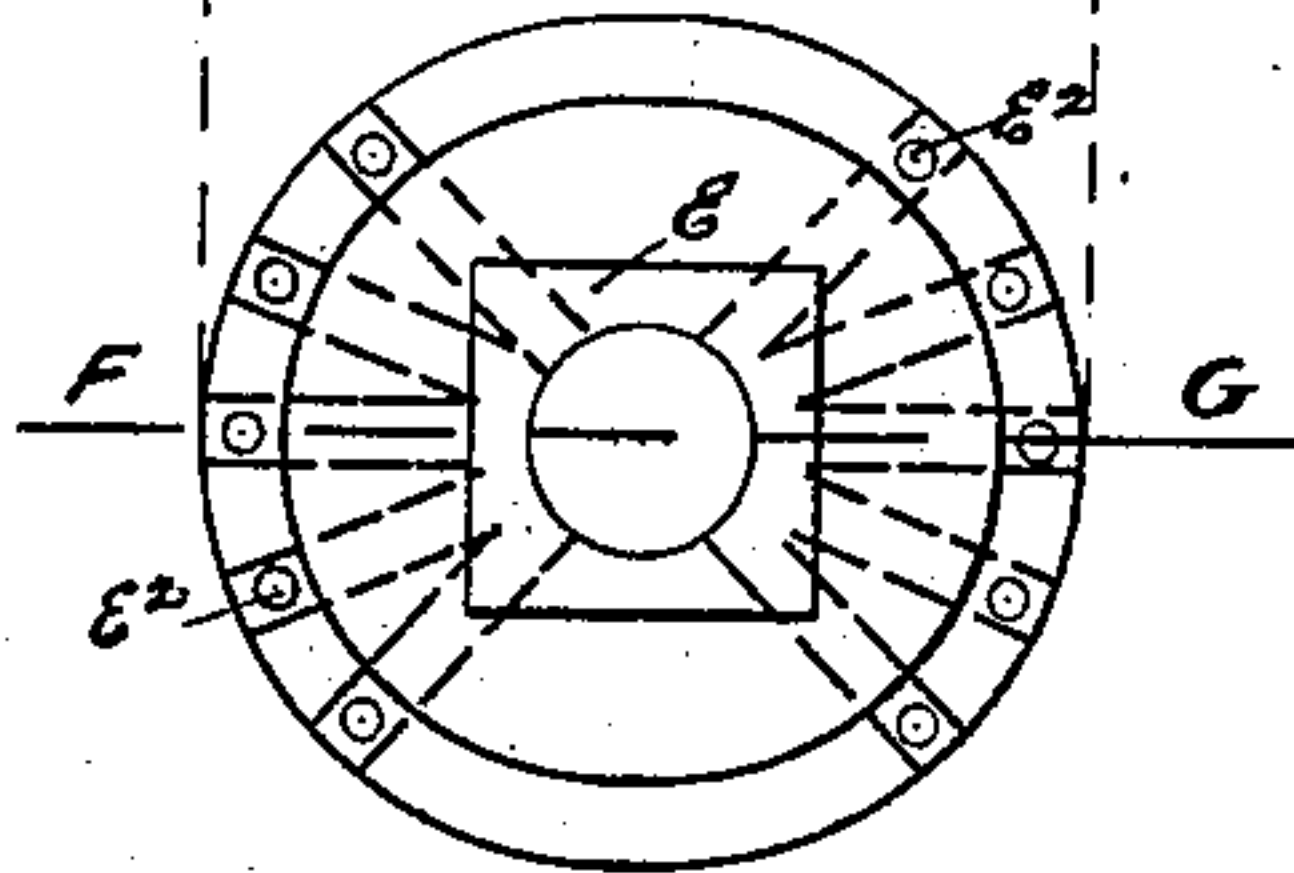


FIG. 6.

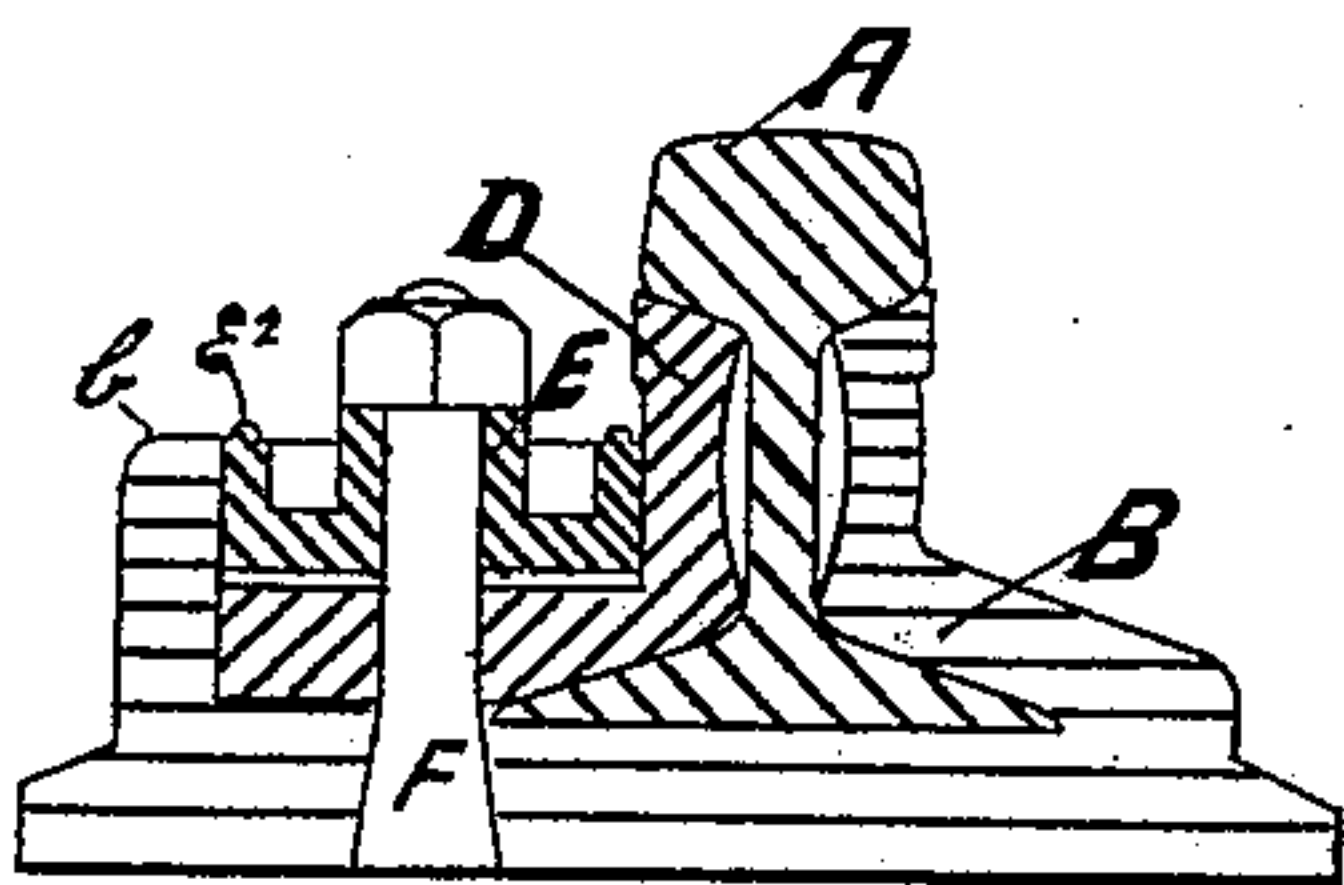
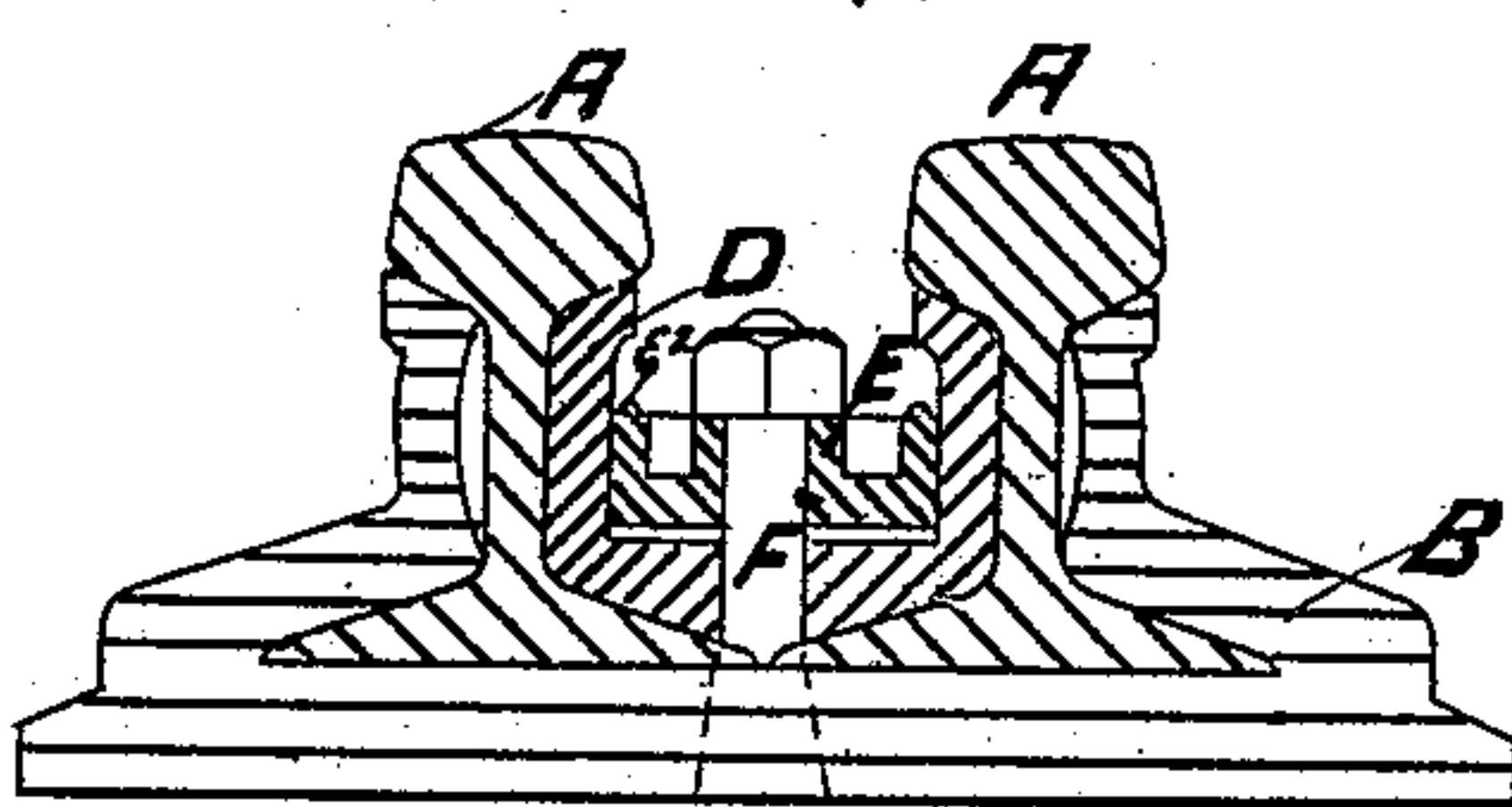


FIG. 7.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN SHIPLEY, OF SAYRE, PENNSYLVANIA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 334,056, dated January 12, 1886.

Application filed September 19, 1885. Serial No. 177,522. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SHIPLEY, of Sayre, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal elevation of rail-joint. Fig. 2 is a plan of same. Fig. 3 is an enlarged section of eccentric washer. Fig. 4 is a plan of same. Fig. 5 is an outside elevation of same. Fig. 6 is a cross-section of rail-joint. Fig. 7 is a cross-section of a double rail-joint.

Like letters indicate like parts in all the figures.

The object of my invention is to provide means to secure the ends of rails so that the rails are held firmly together without the bolts passing through them, as heretofore, and at the same time provide for the more equal contraction and expansion of the rails.

To carry out my object I provide a casting to receive the rails, and by the application of a loose angle-plate having a V-shaped rib opposite each bolt. The rail-joint is made by the loose plate being fastened into the casting by eccentric-formed washers with V-shaped recesses on the under side radiating from the center. The washer, being moved round by the wrench, tightens itself against the casting and the loose angle-plate, so that by the bolt being drawn tight by the nut it virtually forms a lock.

My invention consists of a cast-steel chair for embracing the rails, provided on one side to suit the section of the rail, and the other side with an abutment, so that when the rail ends are placed in the cast chair the loose angle-plate with the V-shaped ribs opposite each bolt can be put in its place. The bolts passing through the chair and the loose angle-plate receive a cast-steel washer eccentric in form, with V-shaped grooves on the bottom edge radiating to the center, and with small

hubs on the top side indicating the position of the V-grooves, on being tightened by the wrench bends against the loose angle-plate and the abutment. Thereby the loose angle-plate holds the rails in position, after which the nut of the bolt, being tightened, virtually forms a lock.

In Figs. 1, 2, 6, and 7, A designates the rails.

B is the chair for embracing the rails, having one side to suit the section of the rails, the other side having an abutment, *b*, so that the loose angle-plate may be fastened between the rails and the abutment.

D is the loose angle-plate, having V-shaped ribs opposite each bolt, and on which the V-shaped grooves on the under side of the eccentric washer fit.

*d* are the V-shaped ribs. *d'* are the V-shaped grooves.

E is the eccentric washer, which is made hollow with a square in the center, so that it can be operated by a wrench to put the larger part of the washer to bear against the abutment and the loose angle-plate holding down the rails. On the under side of the washer V-shaped grooves radiate to the center, and small hubs on the top side are for indicating the position of the V-shaped grooves, so that when the washer is moved by the wrench it fits on the rib on the loose angle-plate.

*e* is the square on washer. *e'* are the hubs on washer.

F are the bolts with a dovetailed head to fit the chair B, and which pass through the center of the eccentric washer, the nut on the top keeping the eccentric washer down in its place, so that it virtually forms a lock.

In Figs. 3, 4, and 5 the enlarged drawing of the eccentric washer is clearly defined with the V-shaped grooves on the under side and the small hubs on the top, the square for the wrench, and hole for the bolt to pass through. Instead of single chairs, double chairs can be made for holding rail-joints, as will be seen on reference to Fig. 7.

I claim—

1. A rail-joint chair consisting of two pieces embracing the rails, the chair proper having an abutment by which the loose angle-plate



can be fastened by the eccentric washer held in position by the bolt and locked by the nut, all substantially as and for the purpose specified and set forth.

- 5 2. A rail-joint consisting of two pieces combined with the eccentric washer, substantially as described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN SHIPLEY.

Witnesses:

W. H. WOOD,  
THEODORE GLIMM.