

(No Model.)

J. T. RICHARDS.
RAILROAD CHAIR OR TIE PLATE.

No. 584,603.

Patented June 15, 1897.

Fig. 1.

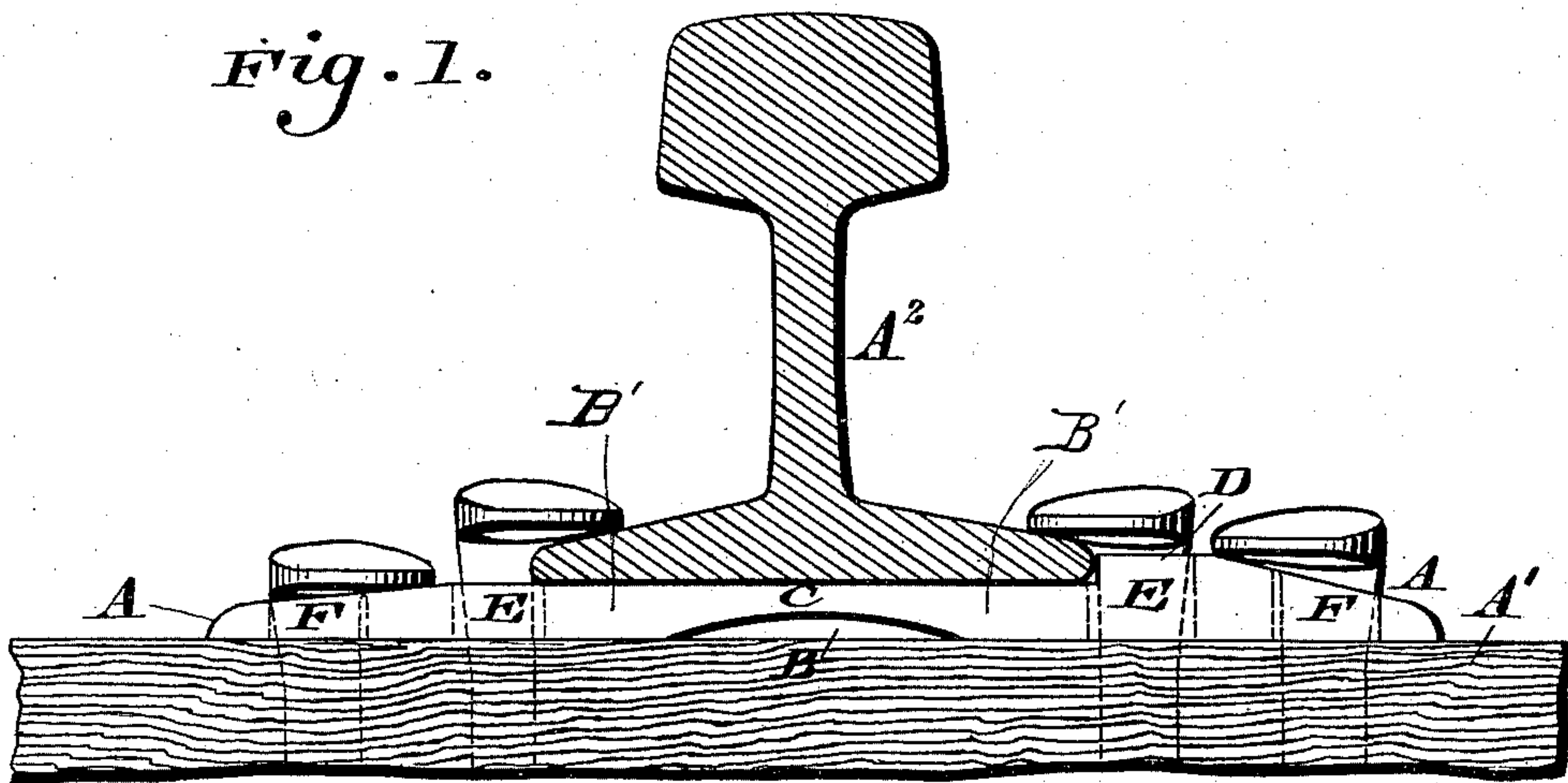


Fig. 2.

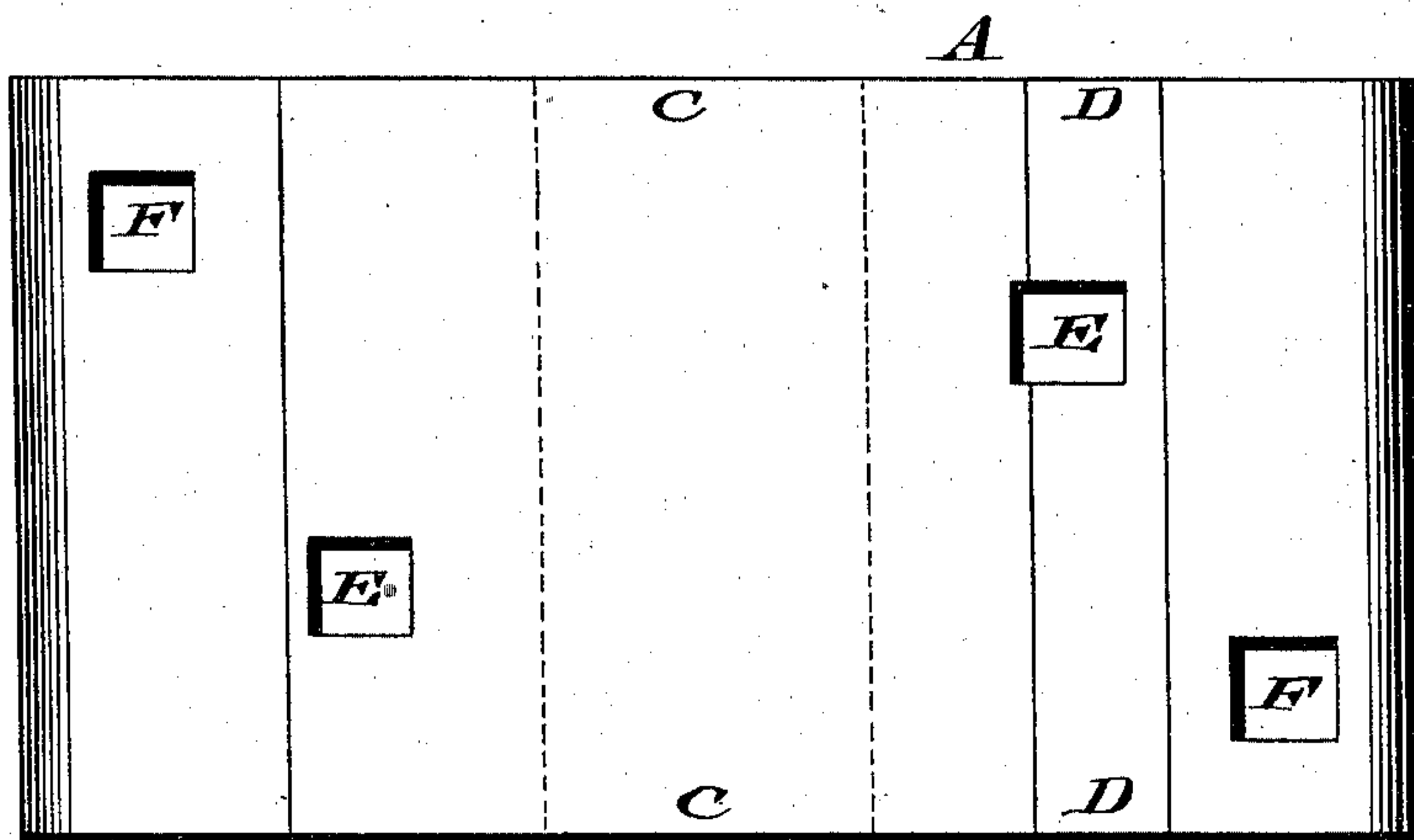
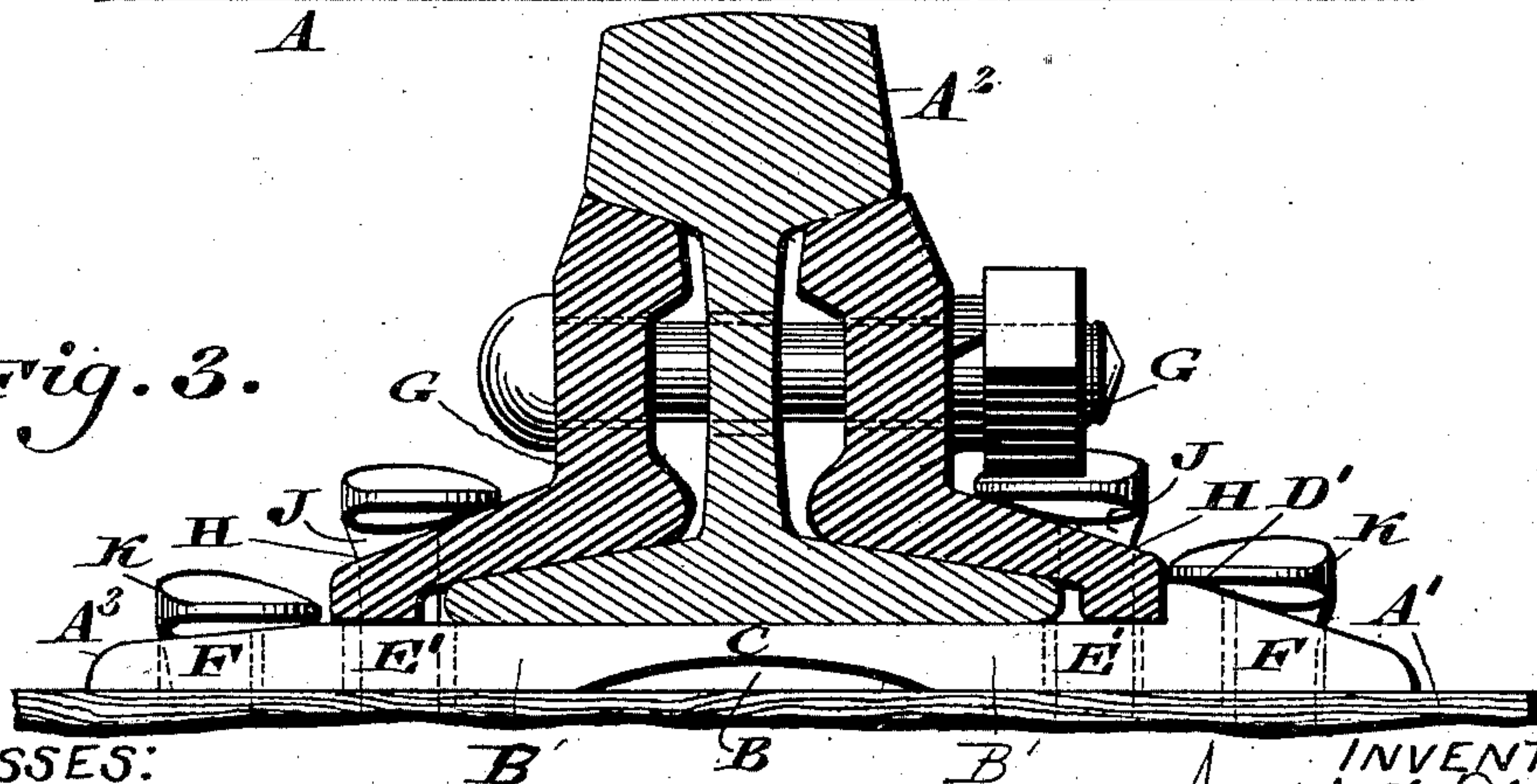


Fig. 3.



WITNESSES:

P. H. Hagley.

L. Douville.

INVENTOR.
BY *Joseph T. Richards.*
John A. Diederichs.
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH T. RICHARDS, OF PHILADELPHIA, PENNSYLVANIA.

RAILROAD CHAIR OR TIE-PLATE.

SPECIFICATION forming part of Letters Patent No. 584,603, dated June 15, 1897.

Application filed January 17, 1896. Serial No. 575,848. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. RICHARDS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Railroad Chairs or Tie-Plates, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to an improvement in a chair or tie-plate adapted to support a railroad-rail and protect the cross-tie or sleeper; and it consists of the formation of such chair or plate with both a cushion or elastic and an inelastic bearing for the rail, said chair or plate having on one side of the upper face thereof a shoulder against which the base of the rail may be seated and openings at different distances from the center of the chair or plate for spiking, respectively, the rail, chair, and tie and the chair and tie.

Figure 1 represents a side elevation of a railroad chair or tie-plate embodying my invention, including a vertical section of a rail in position thereon. Fig. 2 represents a top or plan view thereof. Fig. 3 represents a vertical section thereof, including splice-bars.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a railroad chair or tie-plate which is adapted to be placed intermediate of the cross-tie A' and rail A². On the under side of the chair or plate is the channel B, which occupies a position below the central part of the rail and reduces the thickness of the metal thereat, producing the elastic neck C on which the rail is seated and supported, while, however, firmly sustaining the rail, owing to the fact that the channel B does not extend into the portions B' B' of the tie-plate, said portions being formed uncut or unchanneled on either their upper or lower faces and resting solidly and flat on the tie A'. By this provision there is both an elastic and an inelastic bearing for the rail within the width of the flange thereof, so as to overcome the deadness of a solid bearing and the insecurity and weakness occasioned by cushioned bearing, especially when the latter alone extends at least the full width of the base of a rail and more so.

Rising from one side of the upper face is the vertical shoulder D, against which the

base of the rail is adapted to abut, and in the inelastic or unchanneled portions are openings E and F at different distances from the center of the chair or plate for spiking or fastening the rail to the chair and tie and the chair to the tie. Where splice-bars are employed, as shown at G G, Fig. 3, the base of one of said bars abuts against the shoulder D', while there is no corresponding shoulder for the base of the opposite splice-bar. Openings H are made in the bases of the splice-bars coincident with openings E' in the chair or tie-plate A³ for the passage of the spikes or bolts J therethrough.

In the Letters Patent No. 531,862, granted to me on the 1st day of January, 1895, there is shown a railroad chair or tie-plate formed of two thicknesses of metal, the ends of the lower part being separated, forming a channel whereby the portion of the upper part above said channel constitutes a cushion or elastic bearing for the rail, and said upper part is also bent or crimped vertically, so as to produce two shoulders, one for each side of the base of the rail.

In the present case the chair or tie is formed of a single plate of metal rolled into proper shape with a shoulder on one side of the upper face thereof and an unbroken surface on the face opposite to said shoulder, so as to permit the application and removal of the splice-bars and rail in a direction sidewise to and from said shoulder. Furthermore, there is no provision shown in said patent for the employment of splice-bars in connection with a chair or tie of the order stated; wherefore I have made an improvement in the art, and

I claim as my invention—

A railroad-chair formed of a single piece of metal with a central channel on its under side and unchanneled side portions, a vertical shoulder on the outer end of one of the unchanneled portions, and openings in the unchanneled portions at different distances from the center of said chair for spiking respectively the rail, chair and tie, and the chair and tie.

JOSEPH T. RICHARDS.

Witnesses:

JOHN A. WIEDERSHEIM,
WM. C. WIEDERSHEIM.