

No. 721,745.

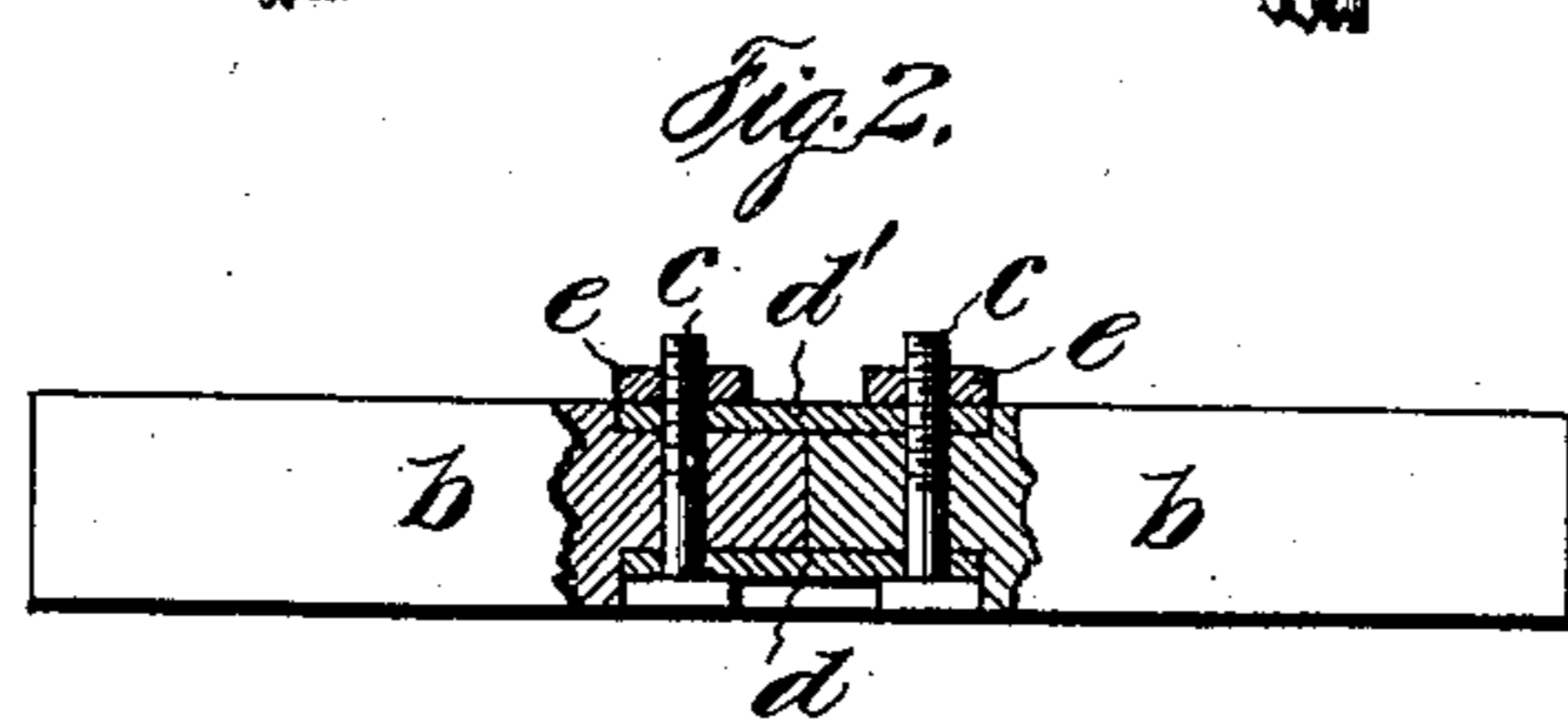
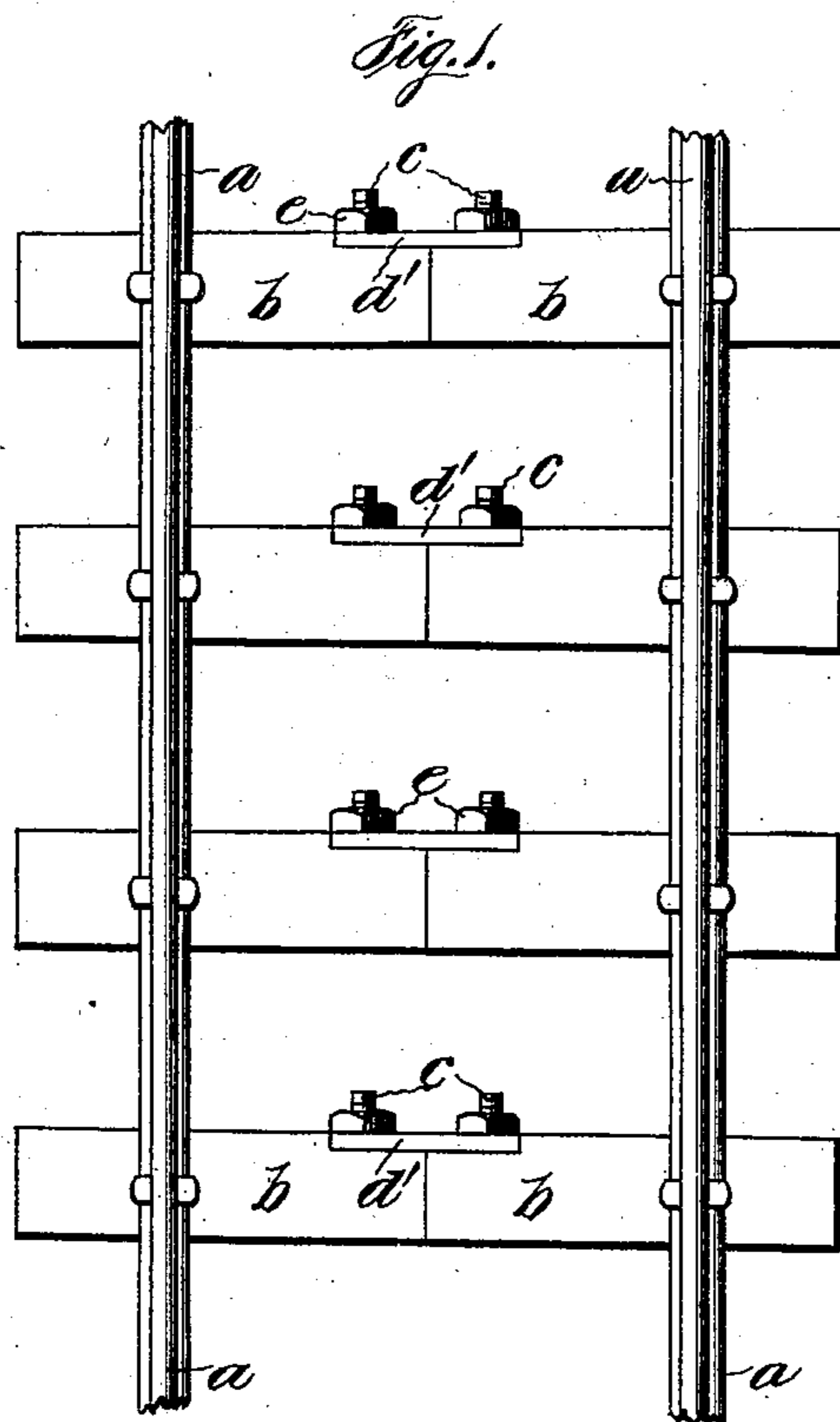
PATENTED MAR. 3, 1903.

Z. C. ROBBINS.

RAILROAD TIE.

APPLICATION FILED NOV. 6, 1902.

NO MODEL.



*Fig. 3.*



WITNESSES:

*Attest.*  
*Henry M. L.*

INVENTOR

*Zenas C. Robbins*

# UNITED STATES PATENT OFFICE.

ZENAS C. ROBBINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 721,745, dated March 3, 1903.

Application filed November 6, 1902. Serial No. 130,311. (No model.)

*To all whom it may concern:*

Be it known that I, ZENAS C. ROBBINS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Railroad-Ties; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top view of a short section of a railroad that is supplied with my improved ties; Fig. 2, a top view of one of my railroad-ties, shown partly in section; and Fig. 3 is a top view of a doubly-perforated metallic tie-plate *d*, that forms a portion of the metallic fixtures employed by me in uniting the respective portions *b b* of my improved railroad-tie with each other, as shown in the drawings.

The following is a full description of my improved railroad-tie and the advantages possessed by it over all other railroad-ties.

The railroad-ties now in general use are composed of one hewed or sawed piece of wood of the requisite proportions. In use when a defect appears in either of the ends of one of those railroad-ties the whole tie must be removed and its vacant place be filled by a sound railroad-tie, whereas by making a rail-tie of two sections united with each other in my improved manner either one of those sections can be easily removed whenever it may show signs of decay without disturbing its companion tie-section, thereby saving labor and enabling a half-length tie-section to do the work of a whole-length railroad-tie, as must be readily apparent, and, again, when railroad-ties are purchased in half-sections instead of full-length ties the cost of two half tie-sections will be considerably less than the cost of a full-length railroad-tie.

The right-angular inner ends of two sections *b b* of my improved railroad-tie are securely united with each other in the manner represented in the accompanying drawings—viz., the vertical front and rear sides of the inner end of each tie-section must be given substantially the shape represented by Fig. 2 of the accompanying drawings, and when those ends are brought together the two metallic tie-plates *d d'* are fitted in the places

prepared for them on the sides of the inner ends of said tie-sections preparatory to the insertion of the screw-bolts *c c*, as represented in Fig. 2. Then the nuts *e e* are placed on the screw-cut ends of said bolts and are so tightly screwed upon the tie-plate *d'* as to hold said tie-sections in a rigidly firm and straight position with each other. It will therefore be perceived that whenever it may become necessary to remove either of those tie-sections it can be easily accomplished and without disturbing its companion tie-section by unscrewing its screw-nut *e* and removing its screw-bolt *c* and then withdrawing one of the spikes that help to secure one of the rails to that tie-section. When all that has been accomplished, that tie-section can be easily withdrawn and a sound tie-section be as easily inserted and secured in its place, and all that can be accomplished with either of the tie-sections without disturbing its companion tie-section, and thereby enabling a half tie-section to perform all that can be obtained from a full-length railroad-tie.

It must be apparent to any one familiar with the subject that the labor expended in removing one of the sections of my improved railroad-tie and inserting another tie-section in its place will be less than half that required for removing an entire railroad-tie and inserting another railroad-tie in its place.

The metallic tie-plates *d d'* must be of sufficient thickness not only to securely tie two of the railroad-tie sections together, but they must also add to their rigidity when they are so united. It is my intention to give such proportions to the tie-plates *d d'*, the screw-bolts *c c*, and their nuts *e e* that they can be safely continued in use for many years.

What I claim as my invention, and desire to secure by Letters Patent, is—

An improved railroad-tie composed of two sections *b, b*, the vertical sides of whose inner ends are recessed for the reception of the perforated tie-plates *d, d'*, that receive the horizontal screw-bolts *c, c*, and enable the screw-nuts *e, e*, to rigidly connect the said tie-sections with each other, all substantially as herein represented and described.

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

ZENAS C. ROBBINS.

Witnesses:

CHESTER HOWE,  
GEORGE M. BOND.