

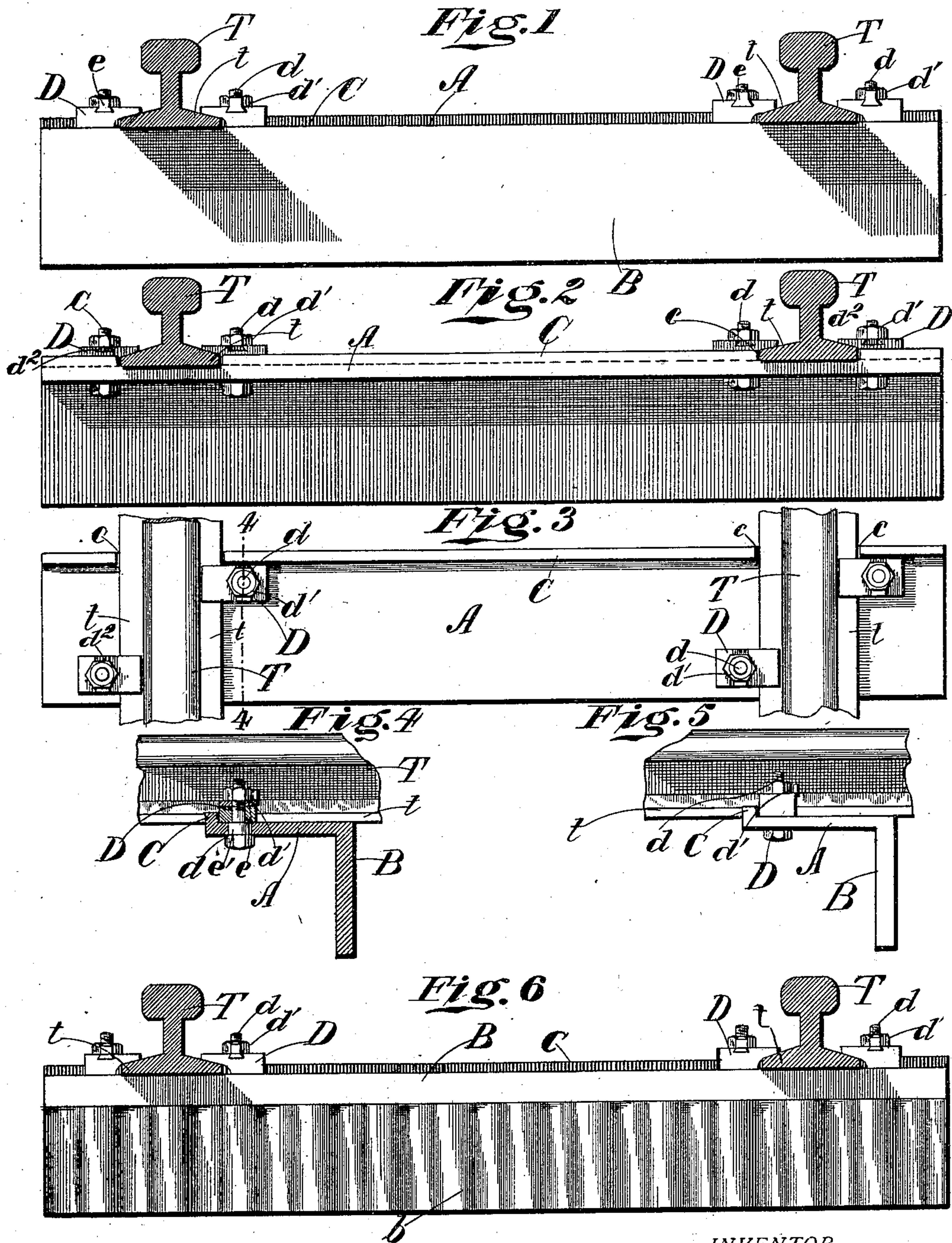
No. 725,758.

PATENTED APR. 21, 1903.

E. McCONNELL.
RAILROAD TIE.

APPLICATION FILED SEPT. 10, 1902.

NO MODEL.



WITNESSES
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EDWARD McCONNELL, OF RICHMOND, VIRGINIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 725,758, dated April 21, 1903.

Application filed September 10, 1902. Serial No. 122,874. (No model.)

To all whom it may concern:

Be it known that I, EDWARD McCONNELL, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Railroad-Ties; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

10 This invention is an improvement in railroad-ties; and its object is to produce a very simple, cheap, and easily-constructed metallic tie which can be rolled in bar form and cut to the desired length, will present sufficient bearing-surface to afford ample support for the rails against vertical pressure, will also present sufficient vertical surface to prevent lateral movements of the tie, and the vertical surfaces may be roughened or corrugated, if desired, to increase the resistance to longitudinal movement, which can be easily tamped with the ballast, and to which the rails may be secured by simple but secure fastenings.

25 To these ends the invention consists in the novel construction of the tie illustrated in the accompanying drawings and hereinafter described and claimed.

30 Figure 1 is a transverse section of a railway, showing a side elevation of the tie. Fig. 2 is an elevation of the opposite side of tie. Fig. 3 is a top view thereof. Fig. 4 is a detail sectional view on line 4-4, Fig. 3. Fig. 5 is an end view, and Fig. 6 is a view of a tie with a corrugated vertical flange.

35 The tie is composed of a length of L angle-iron which is arranged with one flange, A, horizontal and the other, B, vertical. Preferably the horizontal top flange A is wider than the vertical flange B; but I do not restrict myself to such particular relative dimensions. The vertical flange B may be plain or roughened or corrugated, as indicated at *b* in Fig. 6, to prevent endwise movement of the tie when in position in the ballast. On the top horizontal flange A, at the side opposite flange B, is a shallow upstanding flange C, which is provided at points separated the distance apart of the rails with notches *c*, in which the base-flanges *t* of the rails T are confined, the bases of the rails

resting upon the top flange A of the tie. The notches *c* assist in maintaining the rails the proper distance apart.

The rails are clamped to the tie by means 55 of clips D, which are provided with a dovetail lateral groove *d*², in which is inserted a plate *e*, filling said groove and flush with the face of clip, one end of said plate extending beyond the edge of clip. As shown, the horizontal flange A of the tie is provided with elliptical openings on opposite sides of the rails for the reception of the elliptical shoulder *e'* of the bolt to prevent the latter from turning when passed through the perforations made 65 in the flange A and through the clips, and the whole secured by nuts *d'*. When nut is screwed down on the plate *e*, the projecting end thereof is bent up against the side of nut, thereby preventing it from turning, the whole thus 70 affording a secure and simple means for fastening the rails to the ties. I prefer the use of detachable fastenings D rather than to have either of them made integral with the tie, as I consider the construction shown less 75 expensive. I do not, however, restrict myself to the use of the specific fastenings shown.

It will be observed that my tie can be slipped in and out of place as readily as a wooden tie, that the flange A has all the 80 bearing-surface upon the ballast or earth that a wooden tie would have, so that the rails will be amply supported, and the flange B has all the lateral bearing-surface in the ballast that an ordinary wooden tie of the same 85 height would have. Moreover, the ballast can be readily tamped under the flange A from the side opposite flange B, which is a great advantage in the construction of my tie over the ordinary forms of metal ties, which are 90 generally U-shaped or hollow in cross-section, so that it is practically impossible in many of them to tamp the ballast properly under the tie.

My ties can be rolled in lengths from metal 95 bars in an ordinary rolling-mill by using suitably-grooved rolls, and as the entire tie is integral and has no compound parts it can be very cheaply manufactured, and while exceedingly simple is, I believe, entirely novel 100 and superior to any ties heretofore manufactured or patented.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. The herein-described metallic railway-tie formed of angle-iron having a horizontal top flange to which the rails are attached, a depending vertical flange at one edge of the top flange, and a shallow upstanding flange on the top flange at the edge opposite the vertical flange, said shallow flange being notched to accommodate the rails and provided with means substantially as described for securing the rails therein.

2. The combination of the metallic railroad-tie L-shaped in cross-section having a single

depending flange corrugated, and a shallow vertical flange at the edge of its horizontal flange opposite the depending flange, the shallow flange being notched; with the rails extending transversely of the tie and engaging the notches in the shallow flange, and means substantially as described for fastening the rail to the horizontal flange of the tie.

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

EDWARD McCONNELL.

In presence of—

RO. M. KENT, Jr.,

JNO. H. SOUTHALL.