

(No Model.)

J. FITZGERALD.  
RAILROAD TIE.

No. 367,383.

Patented Aug. 2, 1887.

Fig. 1.

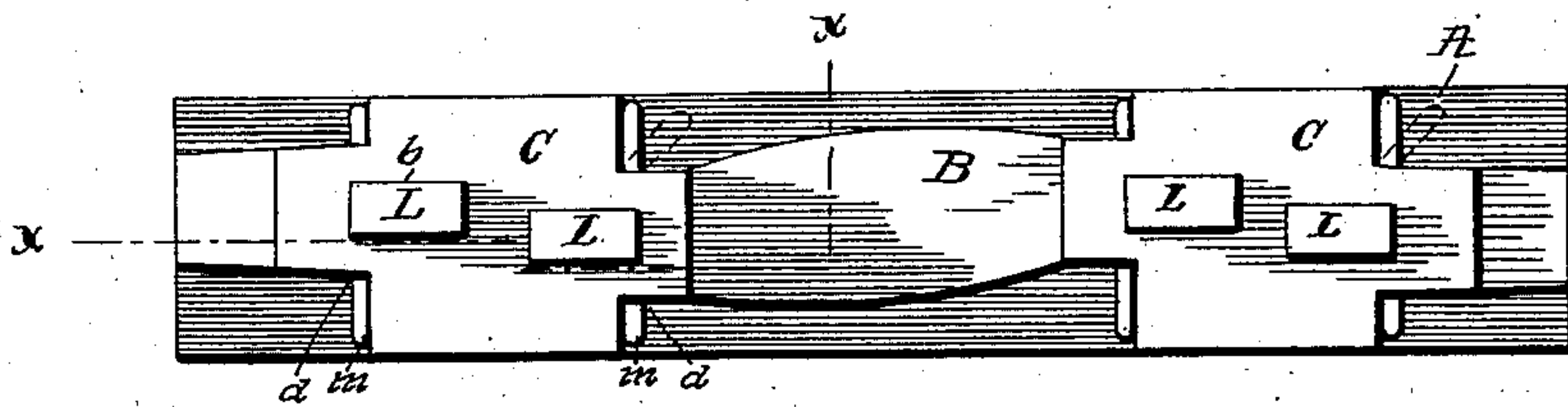


Fig. 2.

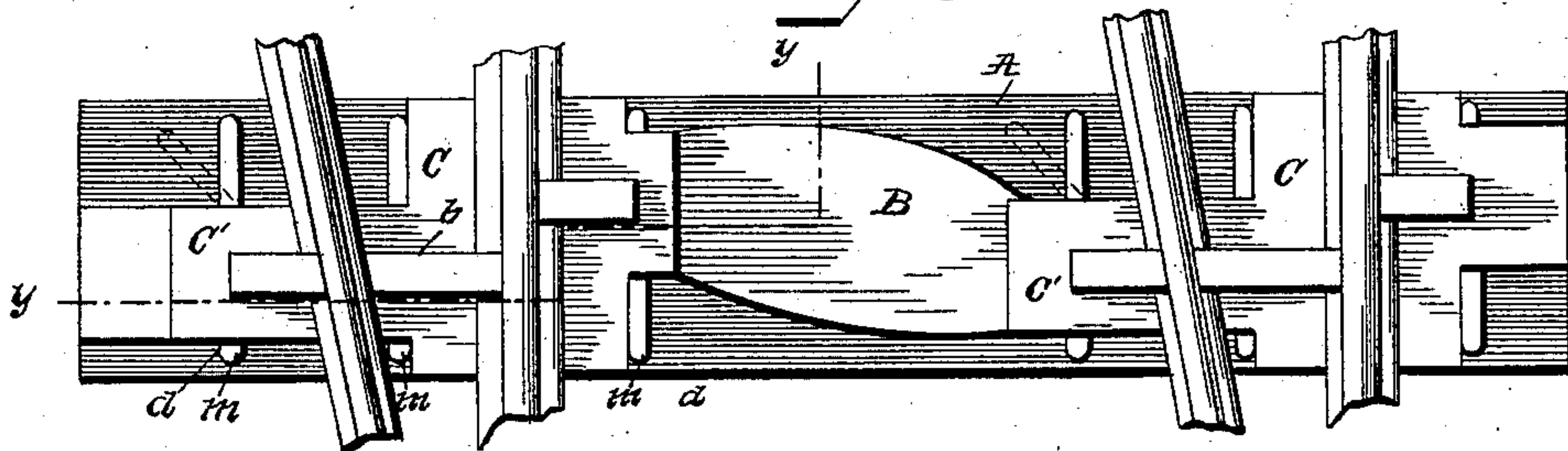


Fig. 3.

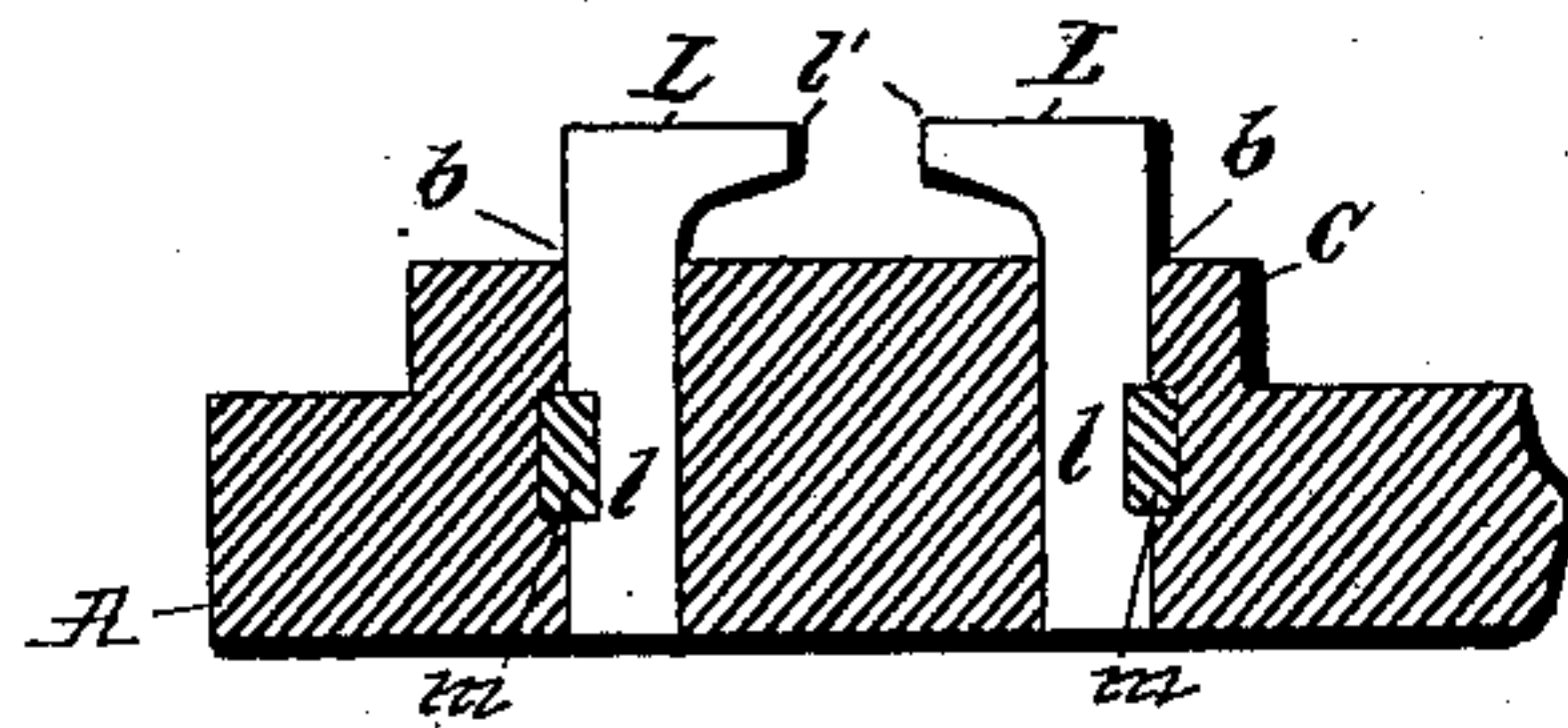


Fig. 4.

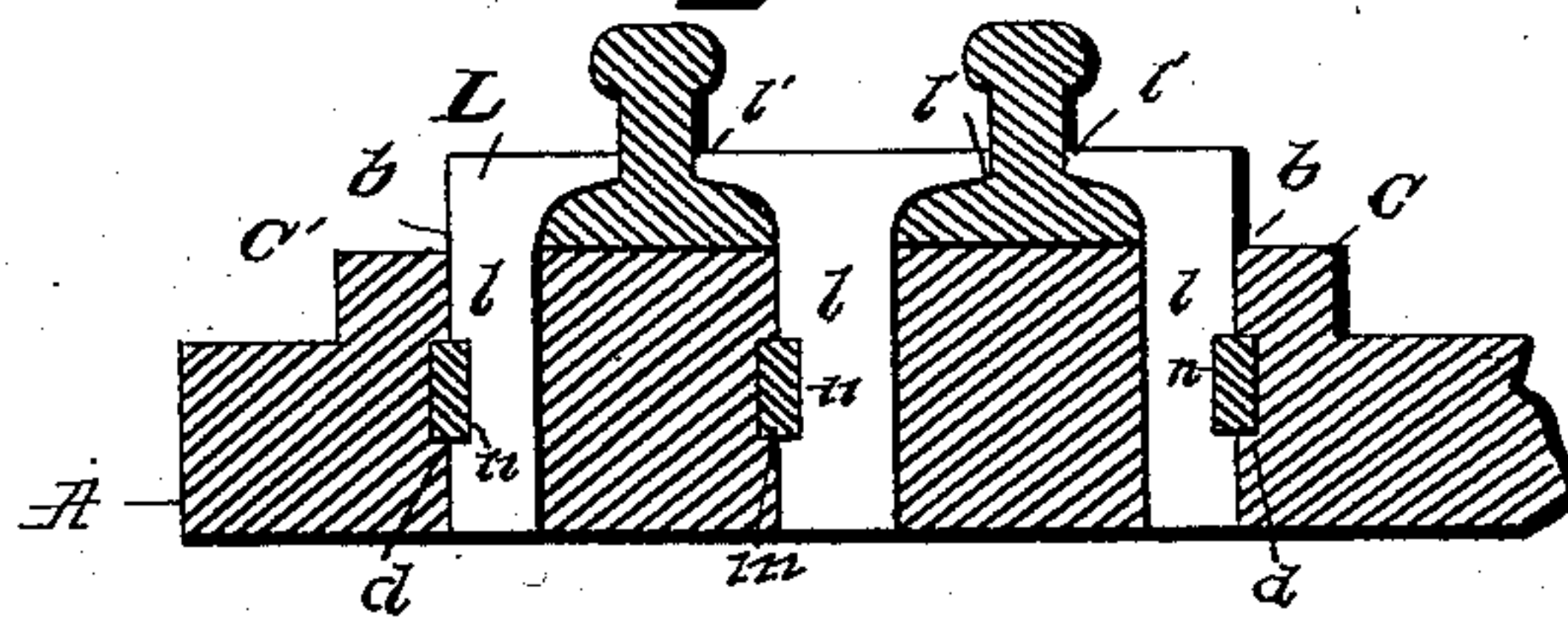
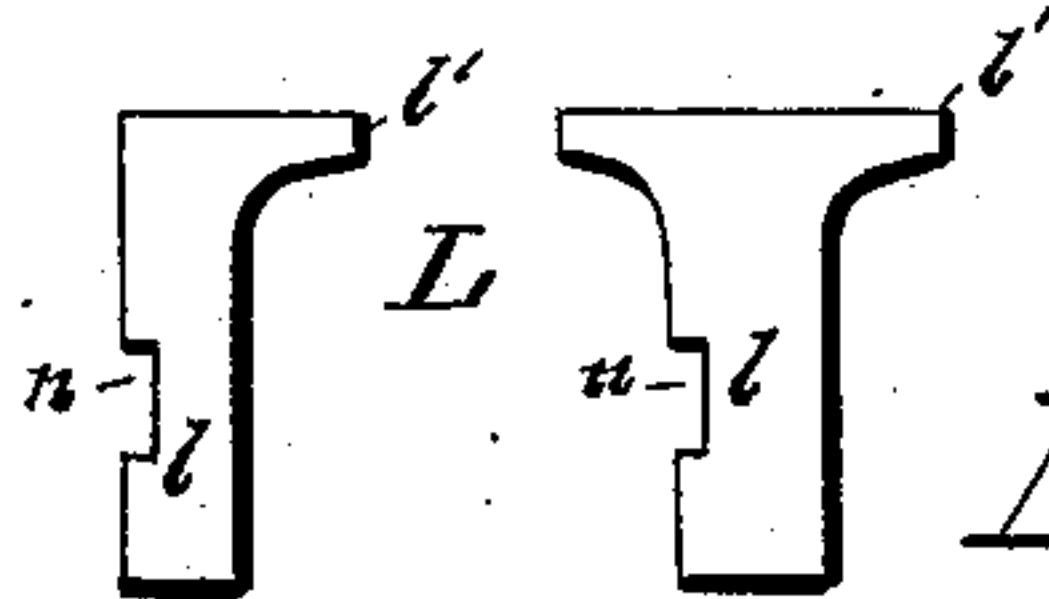


Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 367,383, dated August 2, 1887.

Application filed May 20, 1887. Serial No. 238,870. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN FITZGERALD, a citizen of the United States, residing at Girardville, in the county of Schuylkill and State of Pennsylvania, 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to metallic railway-ties and devices for securing the rails thereto.

The object of the invention is to simplify and improve the construction of this class of devices, to devise a construction, in short, which will be simple and compact in arrangement, economical in cost, easy to manage, durable, and not liable to get out of repair.

With these ends in view I have devised the simple and novel construction which I will now describe, referring by letter to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a single-track tie of my construction embodying my invention; Fig. 2, a plan view of a tie for a main and side track or for two tracks which overlap each other; Fig. 3, a sectional view, on the line X X of Fig. 1, of one end of the tie; Fig. 4, a sectional view on the line Y Y of Fig. 2; and Fig. 5 shows detail front views of the spikes which secure the rails to the ties.

The tie is preferably made of cast metal, and is composed of the base A, the elevated rail-seats C at each end thereof, provided with vertical openings b for the reception of the shanks l of the spikes L, and transverse openings d for the passage of the keys m, which enter notches n in the shanks of the spikes and lock them in position, and the raised portion B, extended between the rail-seats to strengthen the tie between the rails.

The rail-seats C are the full width of the tie, and may be wider, if desired, thereby giving a broad bearing for the rail. In case the tie is designed for a main and side track or two overlapping main tracks, additional rail-seats C' are provided, as shown in Figs. 2 and 4, which are correspondingly vertically and transversely apertured. The spikes are composed of a head, l', which overlaps the foot of the

rail, and the shank l, designed to fit into the opening in the tie. The pin or key m passes through the openings d, formed transversely through the rail-seats, and, entering the notch n in the side of the shank of the spike, locks it in position. Where two rails run side by side, the middle spike has a T-head to fit over the foot of the rails, on each side thereof.

In constructing the track the ties are placed in position, and the rails are laid thereon and secured thereto by dropping the spikes in the openings on each side and forcing them down till the notches in their shanks coincide with the transverse openings, when the keys are driven home. The keys may taper slightly, in which event they will draw the head of the spike down close upon the foot of the rail, as will be readily understood. Where two rails run side by side, with more space between than the ordinary guard-rail, the vertical opening may be extended, also the shank of the T-spike, to correspond with opening, switch-ties, &c., as will be readily understood.

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

1. The herein shown and described railroad-tie, composed of the base, the elevated rail-seats at each end, having vertical and transverse openings, the raised portion between the seats, in combination with the spikes having heels to overlap the foot of the rails, and shanks fitted in said vertical openings and provided with notches corresponding to the transverse openings, and the keys passed through the transverse openings and fitting in the notches in the shanks of the spikes, substantially as set forth.

2. The combination, with the railroad-tie having two rail-seats at each end and three vertical and three transverse openings in the seats, as shown, of the T-shaped spike fitted in the middle opening and spikes fitted in the end openings and having their heads extended toward the T-spike, each of the spikes having notched shanks, and the keys fitted in the transverse openings and entering said notches, substantially as and for the purpose specified.

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

JOHN FITZGERALD.

Witnesses:

FRED MANRED,

THOMAS FITZGERALD.