

J. H. CROWLEY.
TIE BAR FOR RAILWAY RAILS.
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914,806.

Patented Mar. 9, 1909.

Fig. 1

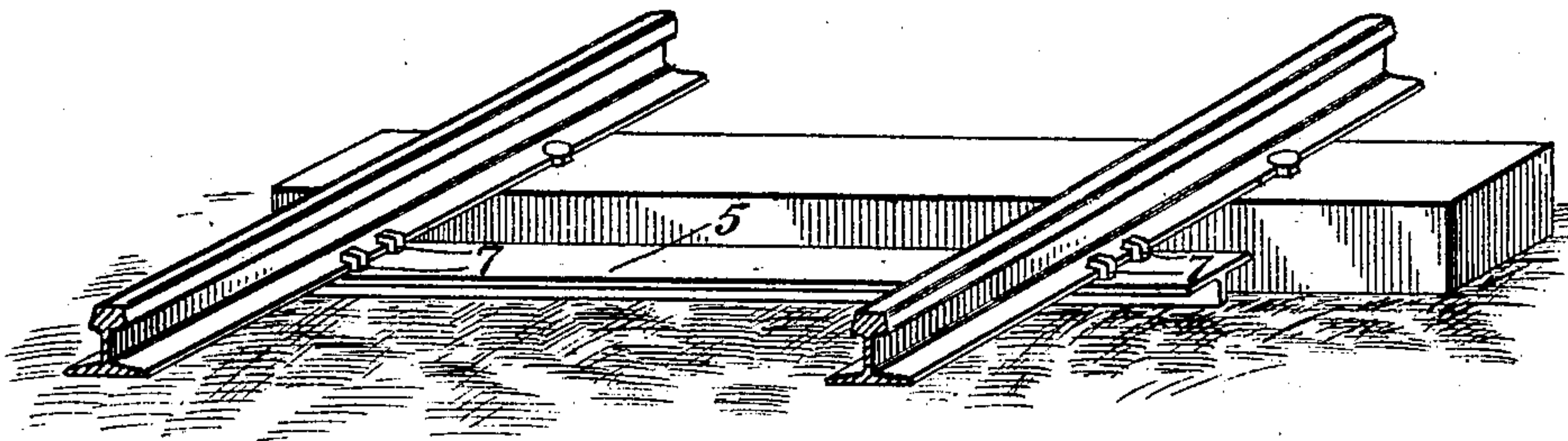


Fig. 2

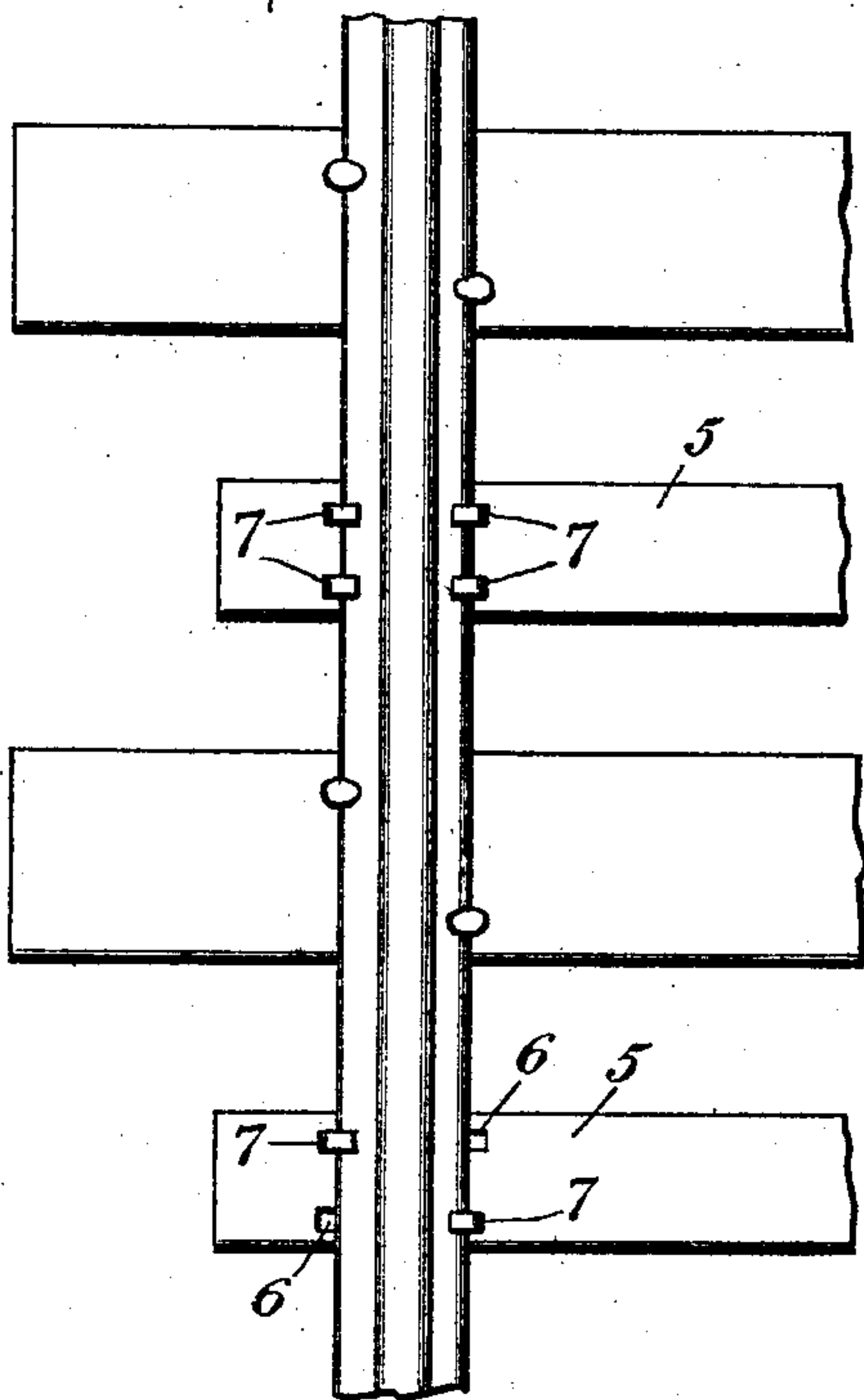


Fig. 3

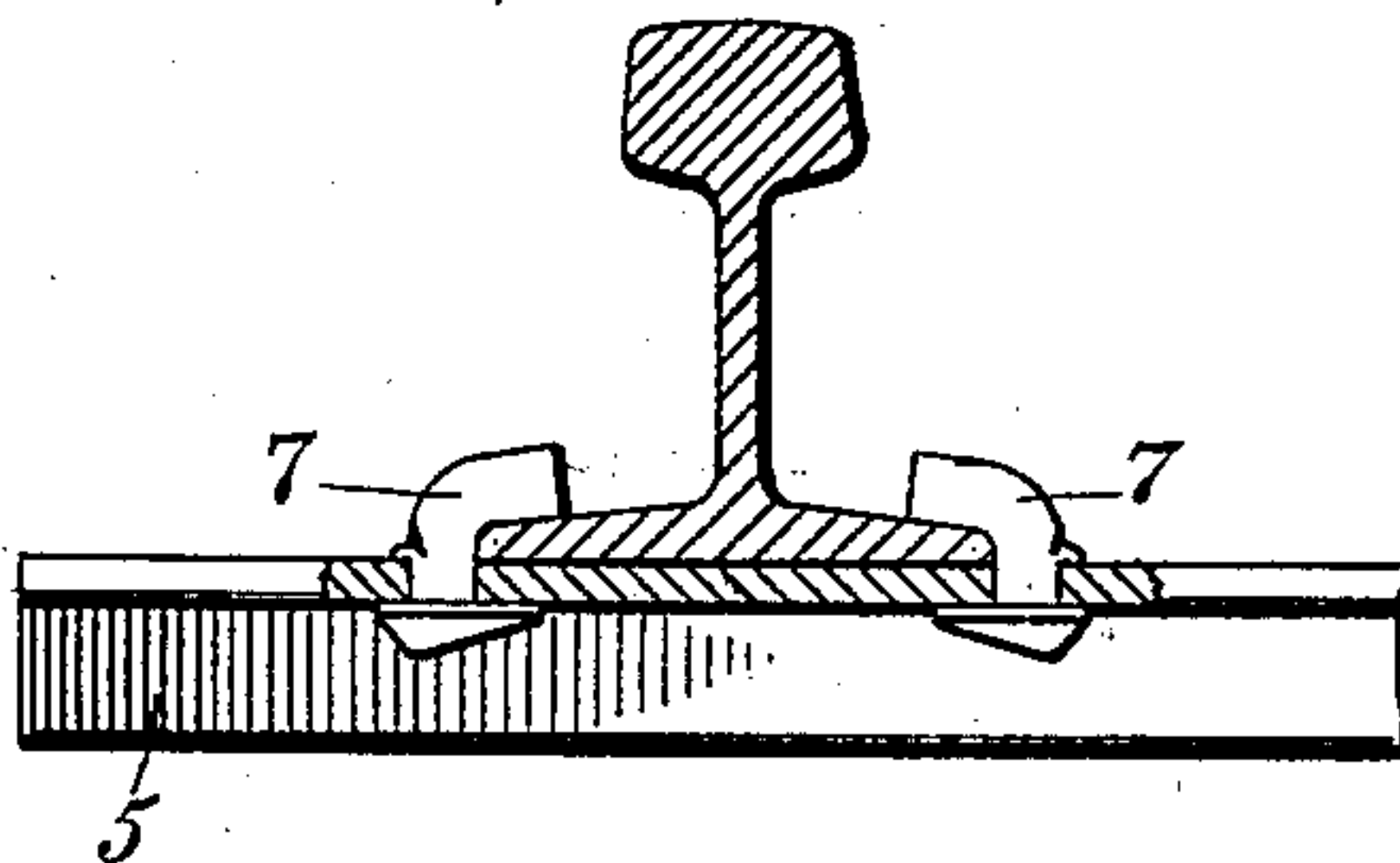
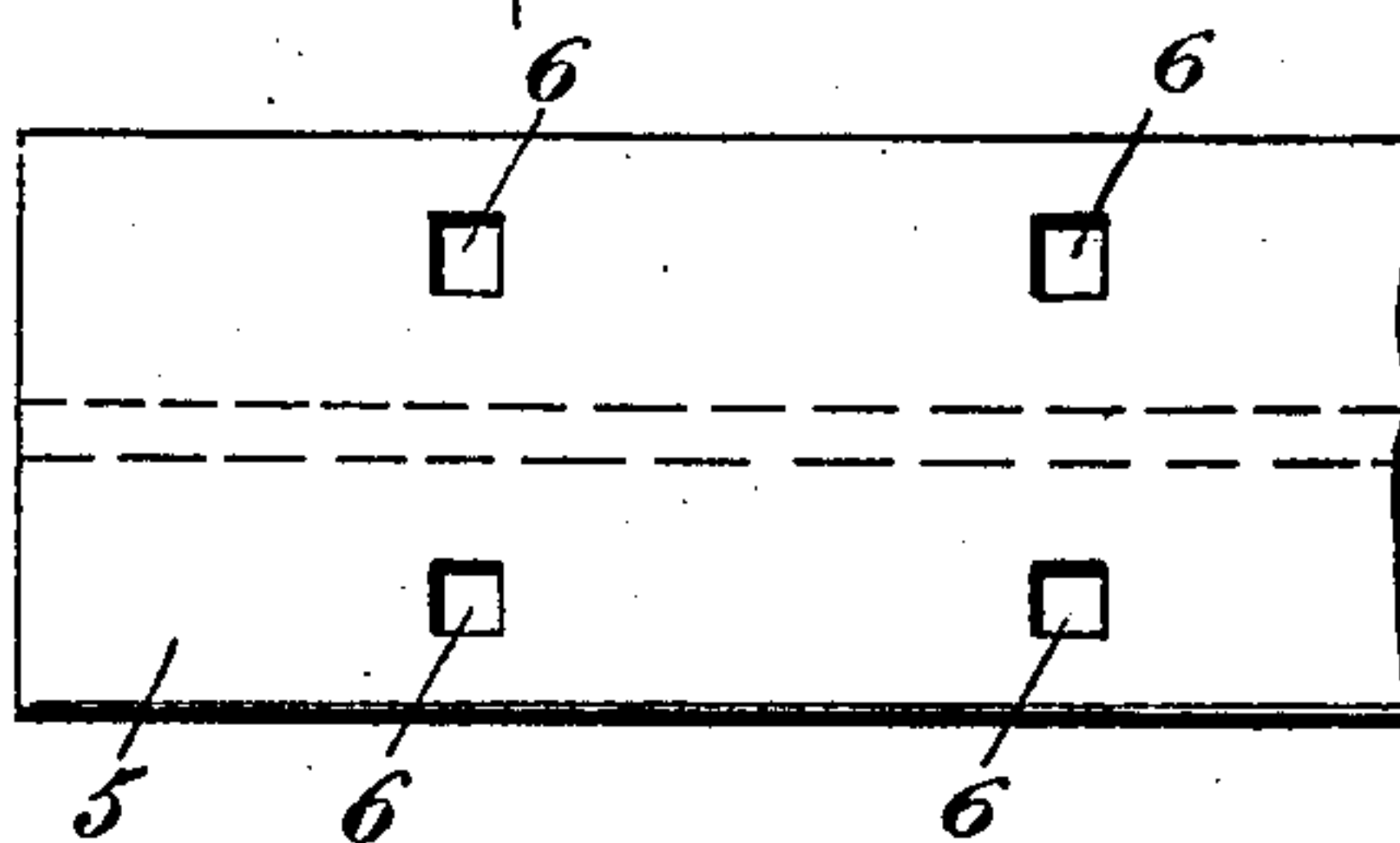


Fig. 4



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JOHN HENRY CROWLEY, OF DULUTH, MINNESOTA.

TIE-BAR FOR RAILWAY-RAILS.

No. 914,806.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed February 17, 1908. Serial No. 416,240.

To all whom it may concern:

Be it known that I, JOHN HENRY CROWLEY, a citizen of the United States, and a resident of Duluth, in the county of St. Louis and State of Minnesota, have invented a new and Improved Tie-Bar for Railway-Rails, of which the following is a full, clear, and exact description.

This invention is an improvement in tie bars for preventing the spreading and turning of railway rails and operating to permanently maintain the track to proper gage. The tie bar is preferably in the nature of a T-iron extending crosswise of the track with its flat face turned upwardly and abutting underneath the base flanges of the rails, and at each side of each rail it is provided with one or more fingers or pins engaging over the rail flanges. These pins or fingers on the inside of the rails prevent the rails from turning outwardly, and the outer pins insure that no spreading of the rails will take place.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views. Figure 1 is a perspective view of a fragment of the road bed of a railway, showing one of my improved tie bars applied thereto; Fig. 2 is a plan of one side of the railway or track, showing the relative arrangement of the tie bars with respect to the ties; Fig. 3 is a cross-section through one of the rails at the point of connection between it and the tie bar; and Fig. 4 is a plan of one end of the tie bar.

The tie bar 5 embodying my invention is preferably in the nature of a T-iron extending crosswise of the track between the ties with its flat face turned upwardly and abutting underneath the base flanges of the rail, and is provided with one or more openings 6 at each side of the flanges of each rail, these openings being arranged contiguous to the edges of the flanges, and are of such size as to snugly fit headed pins or fingers 7 which are passed upwardly through the tie bar and are thereafter bent to engage over the rail flanges, as best shown in Fig. 3, this bending of the pins being easily accomplished with a sledge, while a pinch bar is used to press the heads of the pins upwardly against the tie bar. The pins 7 are preferably made square in cross-section and have the head and body much like the upper portion of a spike. If

desired, the pins may be partially bent before being inserted in place, in which event there is no danger of fracturing the iron when bending them over on to the rail. However, a good quality of wrought iron or soft steel will ordinarily withstand the bending action even though the pins be fully bent after being placed in position.

By placing one of the tie bars in every interval between the ties, as illustrated in Fig. 2, the strain tending to spread or turn the rails over is removed from the ties and is borne entirely by the tie bars. This obviously prolongs the life of the ties, which will be required to perform no other function than as a means of support for the rail. Ordinarily one pin at each side of each rail, if arranged diagonally, as shown in Fig. 2, is sufficient to rigidly connect the tie bar and rail together. This is especially true on straight stretches of track or where the curvature is very slight. It is impossible to turn or spread the rails after the tie bars have been applied, as any turning action of the rails outwardly is resisted by the inner pins and the spreading of the rails is positively prevented by the pins arranged at the outside. The engagement of the pins with the tie bar may, if desired, be augmented by cutting tongues from their outer faces with a chisel and turning the same down onto the tie bar, as illustrated in Fig. 3.

The tie bar may be very cheaply constructed, using such materials for example as scrap rails, and may be easily and readily applied to the track without disturbing the rails or in any wise interfering with the traffic.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

In combination with the rails of a railway, a tie-bar having a flat face underlying the base flanges of the rails, and headed pins passing through the tie-bar, bent over to engage said flanges and provided with tongues in engagement with the tie-bar.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HENRY CROWLEY.

Witnesses:

LAM MACGREGOR,
A. C. REDLOCK.