

G. U. DAVIS.
RAIL JOINT.
APPLICATION FILED JAN. 5, 1911.

996,465.

Patented June 27, 1911.

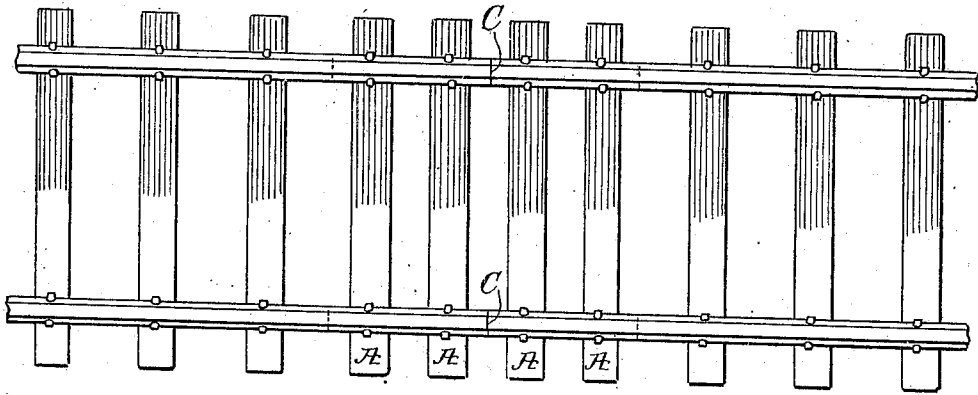


Fig. 1.

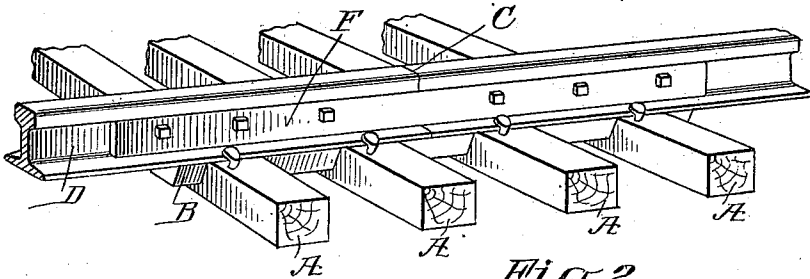
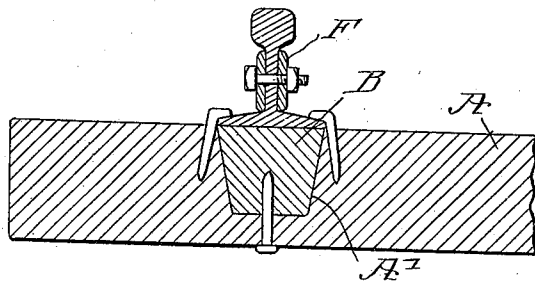


Fig. 2.

Fig. 3.



WITNESSES:
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RAIL-JOINT.

996,465.

Specification of Letters Patent. Patented June 27, 1911.

Application filed January 5, 1911. Serial No. 601,042.

To all whom it may concern:

Be it known that I, GUY U. DAVIS, a citizen of the United States, and a resident of Altheimer, in the county of Jefferson and State of Arkansas, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention is an improvement in rail joints and has for an object to provide a novel construction whereby to support the rails at the joints as thoroughly and efficiently as they are supported at other points with a special view to overcoming the difficulties resulting from low joints incident to the ordinary rail joint now in common use; and the invention consists in certain novel constructions and combinations of parts as will be hereinafter described and claimed.

In the drawing Figure 1 is a top plan view of a section of track embodying my invention. Fig. 2 is a detail perspective view illustrating the rail joint. Fig. 3 is a cross section illustrating the longitudinal joint bar seated in the mortise or recess of one of the joint ties.

In the use of the ordinary rail joint now commonly employed, the rails ordinarily meet midway between the ties and have no support at such point except the small angle bars and the weight of the rolling stock will quickly force the joint down causing the low joints which give so much trouble in railroad operation.

By my invention I provide a firm support for the rails, at the meeting ends thereof and in doing this I employ what for convenience of reference I call the supplemental joint ties A and the longitudinal joint bars B arranged as shown in the drawing. By preference I employ beneath each joint, four special joint ties A, which are arranged a distance of six inches apart and the ties being twelve inches wide, aggregate sixty-six inches or 33 inches on each side of the point C, where the rails abut. These joint ties A are mortised in their upper sides immediately below the rails D to receive the joint bar, the mortises A' being of a depth equal to the vertical thickness of the joint bar so the upper face of the joint bar will be approximately flush with the upper face of the ties A. The rails D rest upon the joint bar

B and are secured by spikes to the supplemental joint ties in a similar manner to the usual spiking of rails to the ordinary ties. 55

The fish plates F connect the rails D at the joint and the joint bar supported by the supplemental joint ties as shown and described, affords a firm, broad base for the rails at the meeting ends thereof, supporting the rails at this point as efficiently as at any other point throughout the length of the rails. 60

It will be noticed that the longitudinal joint bar does not exceed in width at its upper side, the base of the rail so that the said joint bar will not project at its upper edge beyond the side edges of the rail base. It will also be noticed that the opposite sides of the joint bar slope inwardly toward the lower face of the bar so that the sides of the joint bar retreat inwardly, thus affording an opportunity for the spikes which secure the rail base to the ties to get a proper seating within the ties. In other words, the joint bar may be regarded as undercut at its opposite faces and in securing the rail in place, the spikes, as best seen in Fig. 3, do not project through the joint bar or into the same but seat entirely within the tie, the undercut formation of the joint bar affording an ample amount of material in the tie to receive the spikes, as will be understood from the said Fig. 3. 70 75 80

I claim:

The combination, substantially as described, of the rail, ties below the same and provided in their upper faces with transverse recesses whose side walls slope outwardly toward their upper ends, the upper ends of said recesses not exceeding in width the width of the rail base, a longitudinal joint bar seated in said recesses with its side walls sloping inwardly toward their lower edges and with the upper face of said bar not exceeding the width of the rail base and underlying the same and spikes securing the rail base to the ties and seated entirely within their respective ties, substantially as set forth. 85 90 95

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Witnesses:

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