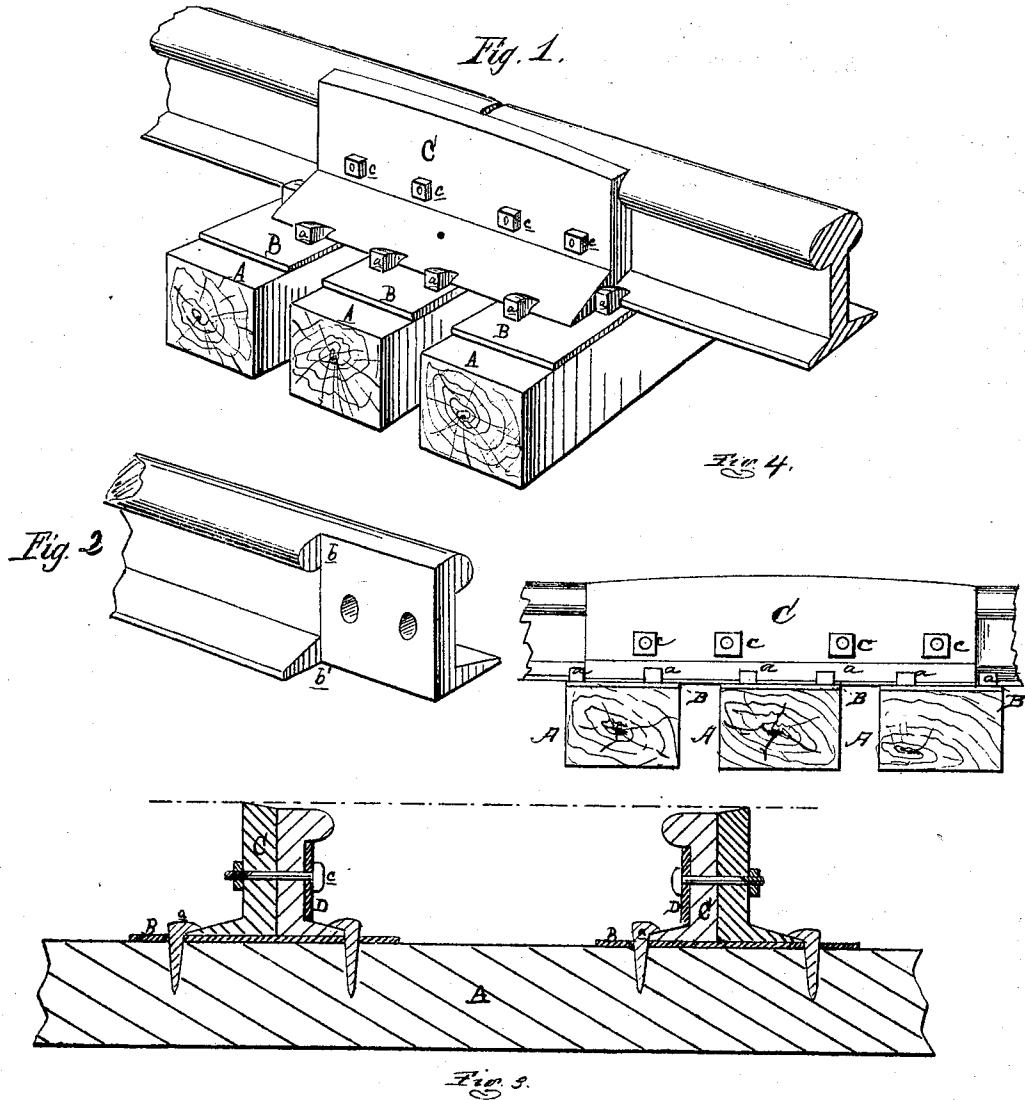


H. WILLIAMS.

Improvement in Splice-Pieces for Railroad-Rails.

No. 129,505.

Patented July 16, 1872.



ATTEST:
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UNITED STATES PATENT OFFICE.

HIRAM WILLIAMS, OF GRASS LAKE, MICHIGAN.

IMPROVEMENT IN SPLICE-PIECES FOR RAILROAD RAILS.

Specification forming part of Letters Patent No. 129,505, dated July 16, 1872.

To whom it may concern:

Be it known that I, HIRAM WILLIAMS, of Grass Lake, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in Rail-Joints; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my improved rail-joint. Fig. 2 is a perspective view of a rail end cut to receive the splice, and Fig. 3 is a cross-section.

Like letters refer to like parts in each figure.

This invention relates to an improved form of joint-splice for railway bars; its object being to afford a firm support for the joint and to relieve the rail ends from the concussion of the wheels of passing trains. The invention consists in a peculiar metallic splice, fitting in a recess cut in the outer sides of the ends of the rails at the joint, with a fish-plate at the inner side of the joint; the splice, fish-plate, and rail ends being securely bolted together by the ordinary track-bolts, and the joint resting on three cross-ties. The ends of the splice are depressed slightly below the top of the ends of the rails, while the middle is raised just enough to compensate, at this point, the ordinary depression of the rails and permit the wheels to pass along with a uniform bearing. The splice is intended to obviate the objection heretofore existing, where the same has been adjusted to the outer surface of the rail, of a change of the bearing upon each rail from the strongly-braced portion of the wheel to the weaker, outer edge of the wheel.

I am aware of the devices shown in patents to John Roebling and John McMartry, October 7, 1867, and of rejected case of R. Wright, April 28, 1867, both of which I disclaim.

In the drawing, A A A are three cross-ties laid one foot apart, from center to center, if

the splice be but two feet in length. The bearing-faces of these ties should be carefully leveled, but preferably I employed a light chair-plate, B, provided with the necessary holes through which to drive the spikes *a a*, &c. On these plates I lay the rails, in whose outer ends the head is cut away, as at *b*, and also the foot, as *b'*, in the vertical plane of the web, about one foot in length of the head and foot being so cut away. In the recesses so formed I lay or place an angle-iron splice, C, whose horizontal angle is chamfered toward the edge, its vertical side being perforated to pass through it the track-bolts *c*, which secure it to the outer side of the rails, and a fish-plate, D, to the inner side thereof. The top edge of the splice is slightly above the plane of the rail top, so as to take the weight of the train instead of having the wheels strike the rail ends, in passing over them, to batter and laminate them.

The splice-bars are as readily rolled as the ordinary angle-irons of commerce, and sawed to length after rolling at a very small advance in the cost of the splice or fish-bar, which it replaces, while the head and foot recesses may be easily punched in a suitable press.

By distributing the weight of the passing train-wheels over three ties no great deflection can possibly occur at the joint.

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

The rail-joint herein described, consisting of the splice-bar C, constructed as described, set into the ends of the rails to receive the wheels upon their ordinary bearings, provided with a broad bearing upon the ties, substantially as set forth, and secured to a fish-plate of similar length, upon the opposite side of the rail, by bolts, as set forth and described.

HIRAM WILLIAMS.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.