

W. W. ROBINSON.
JOINT FOR RAILWAY RAILS.

Fig 1.

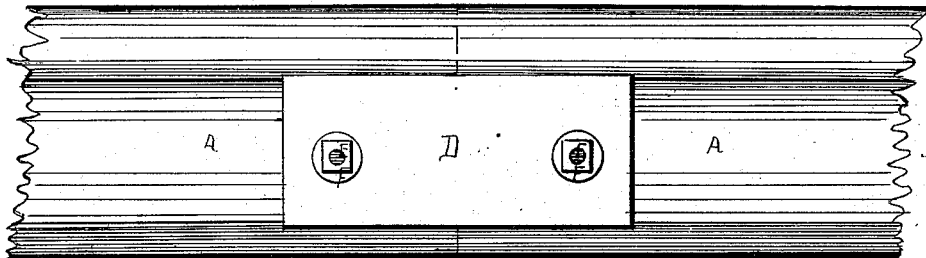


Fig 2

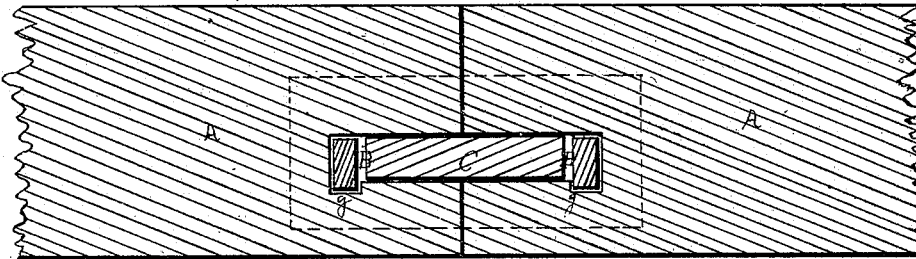
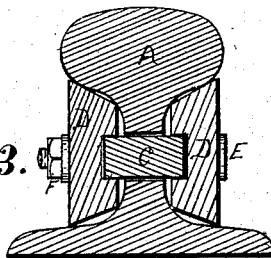


Fig 3.



Witnesses

C. N. Foote.
William Edgar

INVENTOR

W. W. Robinson
Per *Garnell, Alenworth, & Co.*
Attorneys

United States Patent Office.

WILLIAM W. ROBINSON, OF RIPON, WISCONSIN.

Letters Patent No. 111,006, dated January 17, 1871.

IMPROVEMENT IN JOINTS FOR RAILWAY RAILS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM W. ROBINSON, of Ripon, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Joint Splice for Railroad Rails; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation of my improved joint-splice applied to a rail;

Figure 2 is a vertical longitudinal section of the splice and rail; and

Figure 3 is a transverse section of the same.

Similar letters of reference in the drawing indicate corresponding parts.

My invention has for its object to unite the ends of railroad rails in such a manner as to provide for the expansion and contraction of the rails under the influence of heat and cold, and at the same time cause the ends to move uniformly under the weight of passing trains; and to this end

The invention consists in providing the proximate ends of the rails with recesses, and inserting therein a flat metal block, fish-plates being employed upon opposite sides of the rails, the bolts of which pass through the rails between the ends of the recesses and the ends of the block, as will be hereinafter more fully described.

In the accompanying drawing—

A A are the rails of a railroad, provided each at their proximate ends with an oblong horizontal recess, B.

C is a flat block of metal, placed within the united recesses, and extending an equal distance within each rail. This block serves to connect the rails against vertical displacement, and causes them to move uniformly under the weight of passing trains.

The block C is of greater width than the web of the rails, and its projecting edges upon each side of the rails enter longitudinal grooves formed in the inner faces of the fish-plates D.

These plates are united to each other through the rails by means of the bolts E and nuts F, and serve not only to connect the rails against longitudinal displacement, but also to prevent the block C from slipping out of place.

The inner ends of the recesses B are provided with shoulders g, against which the bolts bear, to prevent the rails from being separated.

It will be observed that the block C is somewhat shorter than the united lengths of the two recesses B, and that the bolts F do not fit the inner ends of such recesses with close contact.

The spaces thus left afford the necessary room for expansion and contraction of the rails, and, owing to the arrangement of the grooves in the fish-plates, the longitudinal movement of the rails under different temperatures does not affect the metal block C to bind or cramp the same.

Having thus described my invention,

What I claim as new therein, and desire to secure by Letters Patent, is—

1. A rail-splice, consisting of the block C in the recesses of the rails, of fish-bars and bolts, when the bolts pass through enlarged openings at the ends of the block C, as set forth.

2. In combination with the recessed rails, the block C, grooved fish-plate D, and the bolts E, substantially as described, for the purpose specified.

The above specification of my invention signed by me this day of August, 1870.

WILLIAM W. ROBINSON.

Witnesses:

GEO. L. FIELD,

EDWD. BROCKWAY.