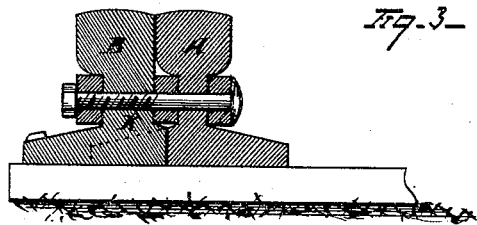
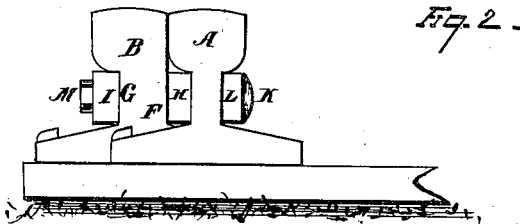
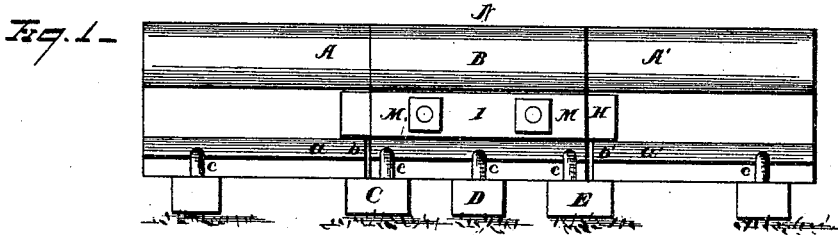


G. WAGGONER.
RAILROAD RAIL-JOINTS.

No. 181,749.

Patented Aug. 29, 1876.



WITNESSES

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GEORGE WAGGONER, OF FREMONT, OHIO.

IMPROVEMENT IN RAILROAD-RAIL JOINTS.

Specification forming part of Letters Patent No. 181,749, dated August 29, 1876; application filed March 13, 1876.

To all whom it may concern:

Be it known that I, GEORGE WAGGONER, of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Railroad-Rail Joints; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improved railway-rail joint; and it consists, first, in the combination, with rails having their outer flanges cut away at their ends, of a railway splice-bar, constructed to be secured to the rails between their cut-away portions, the splice-bar extending flush with the tread of the rails. It also consists in certain details of construction, as hereinafter specified and claimed.

In the accompanying drawings, wherein like letters designate like parts, Figure 1 is a side view of my invention. Fig. 2 is an end view, showing the splice-bar secured to the rails; and Fig. 3 is a cross-section of the splice-bar and rail.

A A' represent the adjacent ends of ordinary T-rails, having their flanges *a a'* cut away at *b b'*, for the reception of the splice-bar B. The ends of the rails A A' and the splice-bar B rest on the ties C D E, which serve as a firm bearing for the splice-bar and rails, and also afford ample means for firmly securing the splice-bar in position by means of spikes *c*. The splice-bar B is constructed with a flat rear face, F, and its front face is grooved at G. Between the web of the rail and the rear face of the splice-bar is placed a bar, H, and within the groove G on the front face of the splice-bar the bar or fish-plate I is secured by bolts K, two or more in number. Opposite the splice-bar B the fish-plate I is secured to the webs of the rail ends A A' by means of bolts K, which pass through the rail-bar H, the splice-bar, and front bar or fish-plate I. These bolts may be secured in place by the ordinary nuts M, or any suitable lock-nut may

be substituted therefor. The splice-bar B is made of less length than the slotted portion of the flanges, in order to allow for the expansion and contraction of the rails, and the ties C and E are broader than the central tie D, for the purpose of allowing free movement of the rail-flanges outside of the ends of the splice-bar. Instead of forming the splice-bar with a rear flat face, as shown, and inserting a separate bar, H, between the splice-bar and the rail, the rear surface of the splice-bar may be formed to fit the web of the rail, and thereby afford resistance against vertical strain or pressure. The upper face N of the splice-bar is on a plane with the tread of the rail, and receives the tread of the wheels as they pass over the joints, thereby preventing the rapid destruction of the ends of the rails, as is common where the ordinary railway-chair is employed.

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

1. The combination, with the ends of two adjacent rails, having their flanges cut away at *b b'*, of the railway splice-bar B, provided with a tread, N, on a plane with the tread of the rails, substantially as and for the purpose specified.

2. The combination, with the rail ends, having their flanges cut away at *b b'*, of the splice-bar B, the bars H I L, and two or more bolts, K, substantially as and for the purpose specified.

3. The combination, with the rail ends, having their flanges cut away at *b b'*, of the splice-bar B, the central tie D, and broad outer ties C and E, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of March, 1876.

GEORGE ^{his} WAGGONER.
mark.

Witnesses:

THOMAS B. HALL,
ALBERT W. BRIGHT.