

(No Model.)

D. C. WINN.
RAILWAY RAIL SPLICE.

No. 439,228.

Patented Oct. 28, 1890.

Fig. 1.

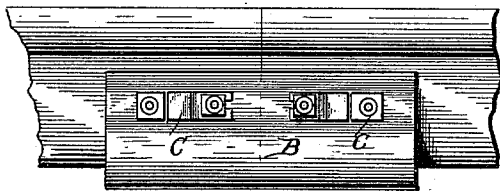


Fig. 2.

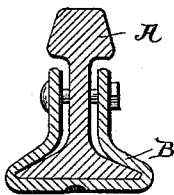


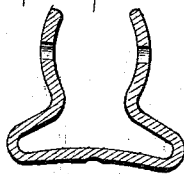
Fig. 4.



Fig. 3.



Fig. 5.



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RAILWAY-RAIL SPLICE.

SPECIFICATION forming part of Letters Patent No. 439,228, dated October 28, 1890.

Application filed January 30, 1889. Serial No. 298,148. (No model.)

To all whom it may concern:

Be it known that I, DAVID C. WINN, a citizen of the United States, residing at Sycamore, in the county of DeKalb and State of Illinois, have invented a new and useful Improvement in Railway-Rail Splices, of which the following is a description.

My invention relates to an improvement in splices or joints for railway-rails, and my object is to produce a joint or splice of this nature which shall serve securely to retain the ends of the rails together and produce a strength at the joint equal to if not greater than that throughout the rail.

To this end my invention, generally described, consists in a rail-joint formed of a single piece of drawn metal bent into shape and having a certain degree of elasticity, which is caused to embrace the foot and web of the rail at both sides, impinging against the under part of the head, in which position it is securely bolted to the joined rails, the nut of such bolt being locked by a nut-lock of specific construction and particular adaptability, all as hereinafter described and claimed.

In the drawings, Figure 1 is a cross-section showing my rail-joint in position. Fig. 2 is a side elevation showing two rails joined by means of my rail-joint. Figs. 3 and 4 are longitudinal sections and plan views, respectively, of the nut-locking plate. Fig. 5 is a sectional view of the splice before application to the rails.

A represents the rails to be joined.

B represents my improved rail-joint, which is made, preferably, in the following way: A single sheet of metal rolled into a piece of the desired width and indefinite length is cut into sections of the required length. The sections thus made are thereupon bent up to a form approximating the web and foot of the rail. It is desirable that the upright parts, which are intended to embrace the web portions, shall be somewhat elastic, and this is accomplished by giving to the base portion a slight upward curvature out of the horizontal and making the upright portion slightly flaring. In this manner the weight imposed upon the rail by flattening the base serves to force inward the cheeks or upright pieces to cause them more firmly to embrace the web. The

upper edges of the cheeks impinge against the lower side of the rail-head, thus affording additional strength to the part of the railway where the rail is placed.

To apply the joint forked, as above described, proper bolt-holes being cut in the cheeks and web the joint is slid over the end of one rail and the end of the other rail is slid into the joint and the bolts introduced and the nuts turned home. I prefer to employ a lock like that illustrated in Figs. 2, 3, and 4, comprising the plate C, having one end provided with the elongated notch shown and bent toward the middle. After one nut is turned home and when the adjacent is nearly so the forked end of the plate C is inserted under the last-named nut around the bolt and the nut and plate given a quarter-turn, sufficient to bring the plate into the position shown in Fig. 2, the square part of the plate being turned up somewhat to permit this to be done and avoid the obstruction of the other nut. The square part is then bent down against the side of the adjacent nut, producing a secure lock, entirely preventing any displacement. The elastic nature of the cheeks serves to hold the forked end of the plate close to the nut.

When the joint is made of heavy metal I provide on the under side a central longitudinal groove, which permits the bending of the joint into form to be more readily accomplished.

It will be observed that while the slight upward curvature given to the base serves to bring the cheeks close up to the web when a weight is imposed on the joint, on the other hand the screwing up of the nut to bring the cheeks against the web serves also to flatten the base portion and provide intimate connection between the base of the rail and the base of the joint throughout.

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

1. A rail-joint comprising a single sheet of drawn metal bent up to present the interior configuration of a rail base and web, having its bottom curved upward and having its cheeks flaring upward and provided with the longitudinal groove on its under side, substantially as described.

2. The combination, with the rails A, of the

rail-joint B, comprising a single sheet of drawn metal bent up to present the interior configuration of a rail base and web and having its cheeks normally flaring and its bottom curved
5 upward embracing the meeting ends of the rails at the web and base portion thereof and impinging against the underside of the head thereof, bolts passing through the cheeks and web, nuts on said bolts, and a nut-lock com-
10 prising the metallic plate C, forked at one end

to embrace a bolt under the nut, bent near its middle part to produce the shoulder shown and having its opposite square end impinging against the other nut, substantially as described.

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