

(No Model.)

C. LICARDIE.

FISH PLATE.

No. 382,047.

Patented May 1, 1888.

Fig. 1

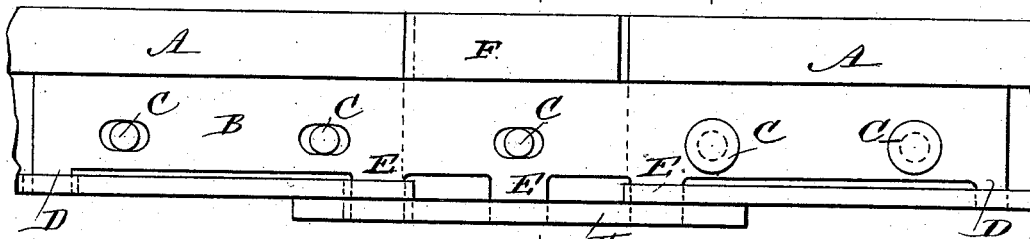


Fig. 2

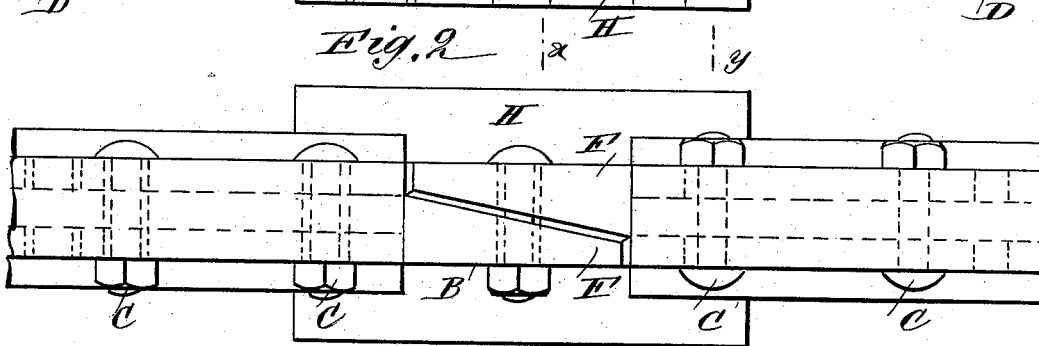


Fig. 3

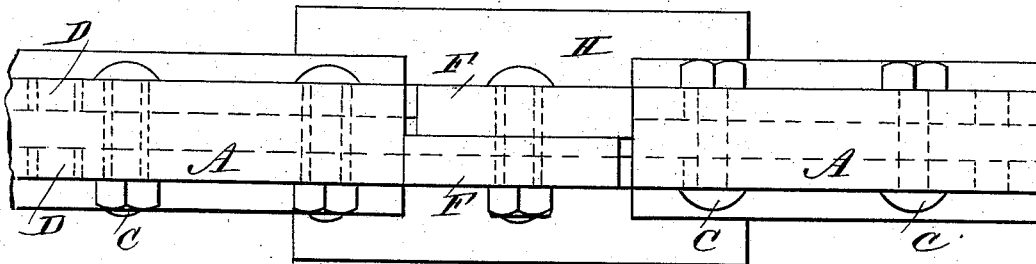


Fig. 5

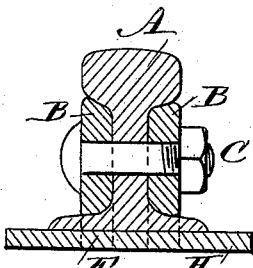


Fig. 4

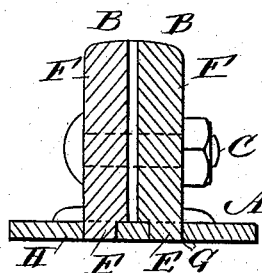
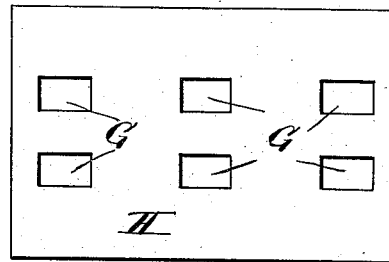


Fig. 6



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# UNITED STATES PATENT OFFICE.

CAMILLE LICARDIE, OF CLERMONT, DE SAN MARCOS, GUATEMALA.

## FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 382,047, dated May 1, 1888.

Application filed January 11, 1888. Serial No. 260,385. (No model.)

*To all whom it may concern:*

Be it known that I, CAMILLE LICARDIE, a citizen of France, at present residing in Clermont, Department of De San Marcos, Guatemala, Central America, have invented a new and useful Improvement in Fish-Plates, of which the following is a full, clear, and exact description.

The object of my invention is to provide new and improved fish-plates for railway-rails, which are simple in construction.

The invention consists of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement. Fig. 2 is a plan view of the same. Fig. 3 is a similar view of a modified form of the same. Fig. 4 is a vertical cross-section of my improvement on the line *x x* of Fig. 1. Fig. 5 is a similar view of the same on the line *yy* of Fig. 1, and Fig. 6 is a plan view of a tie or sleeper plate.

The rails A are fastened longitudinally together by the fish-plates B, bolted to the said rails by means of the bolts C. Each of the plates B is provided on each end with a downwardly-projecting tooth, D, which fits loosely into a corresponding aperture formed in the base of the rail. The plates B are also provided with downwardly-projecting teeth E, which are somewhat longer, and pass through apertures formed in the base of the rail and into apertures G, formed in the plate H, which rests on the tie or sleeper.

In the middle of the fish-plate B is formed an upwardly-projecting tongue, F, which fits into a recess formed between the adjoining ends of the rails A, which are held a suitable

distance apart corresponding to the length of the tongue F. The latter is rounded off at its upper edge, so as to conform to the shape of the rail, as shown in Fig. 4. The tongues F of the two fish-plates B join each other longitudinally between the ends of the rails A, and are either provided with straight inner faces, as shown in Fig. 3, or with angular inner faces, as illustrated in Fig. 2.

It will be seen that the tongue F and the teeth D and E hold the abutting rails A together longitudinally, and thus prevent the rails from injuring the bolts C when contracting or expanding. The teeth E of the fish-plates B also hold the plate H in its relative position on the bases of the rails A.

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

1. The combination, with the rail A, of the fish-plate B, having the teeth D and E, the teeth E passing into apertures in the plate H, and the teeth D passing into apertures in the base of the rail, substantially as herein shown and described.

2. The combination, with the rail A and the plate H, of the fish-plate B, having the upwardly-projecting tongue F, the top of which is flush with the rail, and the teeth D E on its bottom edge, the teeth E passing into apertures in the plate H, and the teeth D into apertures in the base of the rail, substantially as herein shown and described.

3. The combination, with the rails having their ends placed a suitable distance apart, of the fish-plates B, having the upwardly-extending and overlapping tongues F projecting into the space between the ends of the rails and provided with teeth on their lower edges, substantially as herein shown and described.

CAMILLE LICARDIE.

Witnesses:

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S. GAYORD.