

H. FORSYTH.
Railway Rail-Joint.

No. 218,954.

Patented Aug. 26, 1879.

Fig. 1.

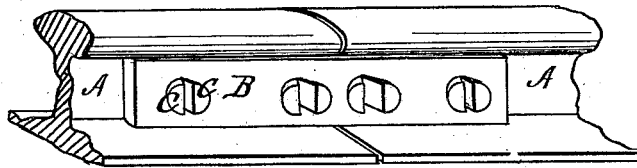


Fig. 2.

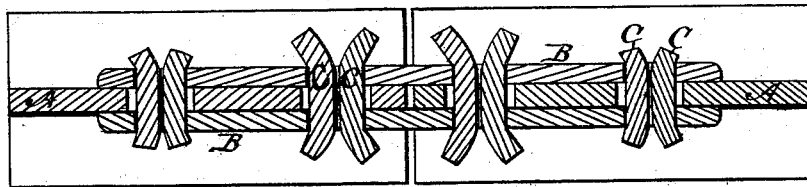


Fig. 3.



Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY FORSYTH, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **218,954**, dated August 26, 1879; application filed September 9, 1878.

To all whom it may concern:

Be it known that I, HENRY FORSYTH, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Joints for the Rails of Railways, of which the following is a specification.

The accompanying drawings, which form a part of this specification, show at Figure 1 a perspective view of my improved joint for railroad-rails, and at Fig. 2 a central horizontal section of the same. Fig. 3 shows the clamping-pieces employed as they appear before insertion. Fig. 4 is a cross-section of the clamping-pieces.

Like letters indicate like parts in all the figures in which they are used.

My improvement relates to the means used to clamp the fish-bars and rails together; and consists in the employment for that purpose of straight-sided metal pieces, which fill the openings in the fish-bars and are spread at each end, substantially as hereinafter set forth.

In the drawings, A A are the rails, and B B the fish-bars, all of which are provided with the usual oval or other shaped openings for the insertion of the clamping devices. C C are wrought-metal pieces, flattened upon one side and straight upon all sides, and of dimensions and form, when united or placed side by side, conforming to the openings in the fish-bars through which they are passed. They project somewhat upon each side, as shown in the drawings, Fig. 2, and after being inserted through the bars the projecting ends are spread, as shown in Figs. 1 and 2, so that the fish-bars and rails are firmly clamped between the bent ends. This spreading is performed at both ends of the pieces C, and I thereby save all necessity for providing them with heads. They are given all necessary peculiarity of conformation while being rolled in the bar, and thus any special expense in their construction is obviated.

No wedges are employed or deemed necessary, as the clamping-pieces are sufficiently large to resist any tendency to straighten out and release their hold.

I prefer to use but two pieces in each opening, as that number enables me to secure the parts very firmly. A greater number may, however, be employed, if desired; but they should be clamped in like manner by spreading their ends or otherwise secured.

The bent ends may be short or long, as desired, as fully appears in Fig. 2.

If the parts become loosened by wear, they can be readily tightened by additional spreading of the ends.

I am aware that a railway-rail joint has been made by the insertion of two headed spikes inserted through the hole in the rail and fish-plate, the points of said spikes being thereafter bent apart; but my invention differs therefrom, inasmuch as the inserted pieces forming my joint are straight and without heads, being cut from rods, and they are fastened by the separation of the ends on both sides of the rail, thereby clamping against the rail at both sides, and insuring a firm joint easily, instead of clamping against one side only, whereby a firm joint can only be secured with difficulty.

Having thus fully described my invention, I claim—

The combination, with the rail A and fish-bars B, of the straight-sided clamping-pieces C C, two or more, passing through the rail and fish-bars, filling the openings in the latter and spread at both ends, substantially as set forth.

HENRY FORSYTH.

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