

F. EDER.
RAIL JOINT.

APPLICATION FILED OCT. 1, 1910.

1,051,870.

Patented Feb. 4, 1913.

Fig. 1.

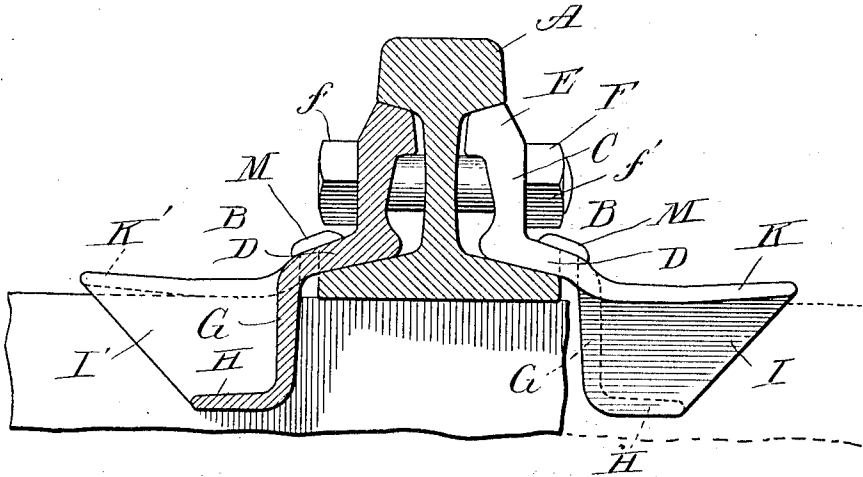


Fig. 2.

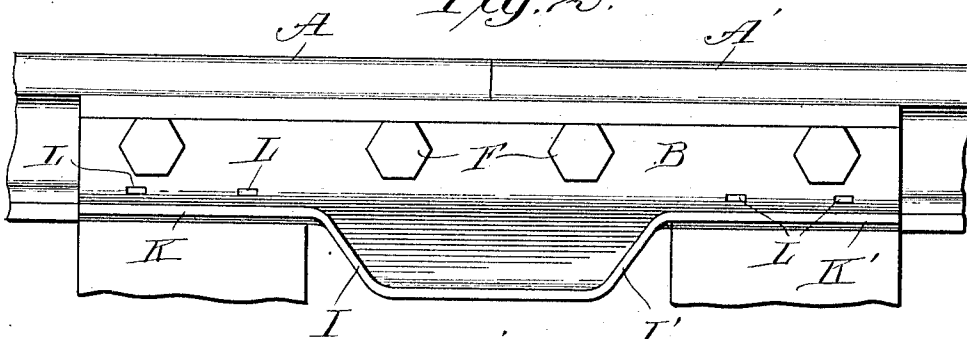
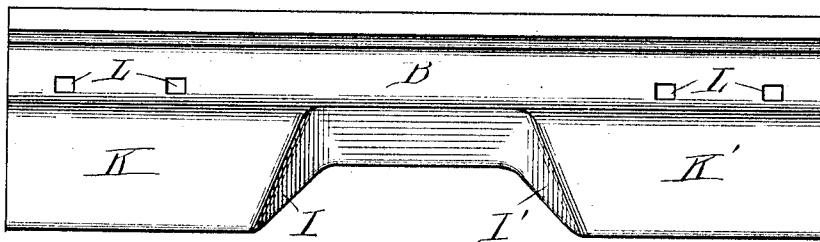


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,051,870.

Specification of Letters Patent.

Patented Feb. 4, 1913.

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To all whom it may concern:

Be it known that I, FRANZ EDER, a subject of the Emperor of Austria-Hungary, and residing at Brooklyn, county of Kings, State of New York, have invented a certain new and useful Improvement in Rail-Joints, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the art of connecting together two meeting rail ends and has for its primary object to produce a simple and powerful joint.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but for a full understanding of my invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a view partly in end elevation and partly in section, of a rail joint made in accordance with a preferred form of my invention; Fig. 2 is a side view of the joint; and Fig. 3 is a plan view of one of the splice bars.

Referring to the drawing, A and A' represent two meeting rail ends.

B, B are two splice bars arranged on opposite sides of the rail ends. Each splice bar consists of a girder C and a foot flange D. At the upper end of each girder is an enlargement or head E which underlies the head of the rail ends. Bolts F pass through the girders and through the webs of the rails to secure the same together. The parts are so proportioned that the outer side faces of the girders are substantially vertical, and therefore parallel, when the joint is assembled. In this way the heads *f* and the nuts *f'* of the bolts may bear against the girders at all points around the bolt holes without the intervention of peculiarly shaped parts. Each girder diminishes in thickness from the head to the foot plate, it being thinnest in the vicinity of the foot plate. This may be described otherwise by stating that the inner side faces of the girders diverge from each other from the upper ends of the girders toward the lower end.

The foot flanges are made relatively wide so as to provide laterally projecting wings or feet. To insure the maximum strength without increasing the depth to an impracticable extent, I depress a portion of the foot flange so as to cause it to extend first downwardly and then laterally. In the preferred arrangement I depress the central portion of each foot flange so as to make a downwardly extending truss G having an outwardly extending web H at its lower end; the members G and H being connected to the end portions of the foot flange by means of webs I and I'. I also prefer to bend the ends of the foot flanges upwardly along the outer edges as indicated at K and K', thus strengthening the foot flange against bending along lines transverse to the rails. It will be seen that the members G, H, I and I' form on each foot flange a rigid depending pocket which is closed on all sides except the top and the outer side. The members G and H may be located at any desired angle relative to each other and relative to the remainder of the foot flange, it being preferable, however, to place the members H in such positions that water entering the pockets will not be held therein but will be left free to flow off. When the girders are in place the pocket-like trusses extend downwardly between adjacent ties but not to such an extent as to be a disadvantage in ballasting the road bed. I also prefer to depress the projecting portions of the foot flanges so as to carry them down below the tops of the rail bases and permit them, if desired, to rest upon the ties; this being the arrangement which I have illustrated. Where the projecting portions of the foot flanges are depressed, I prefer to make the bend at a point somewhat removed from the edges of the rails so as to leave room between the depressed portions and the edges of the rail bases for spike holes L. When spikes, as indicated at M, are driven through these holes into the ties, they are backed by the outwardly projecting portions of the foot plates, thus making the fastening very secure.

The splice bars may be made in any suitable way, but I prefer to roll them in the form of long blanks, cut the blanks into the proper lengths, and then bulldoze the short lengths so as to incorporate in them the truss feature. It will be seen that the foot flanges

decrease gradually in thickness from the inner edges to the outer edges, thus affording a maximum strength with a minimum weight.

5 While I have illustrated and described with particularity only a single form of my invention I do not desire to be limited to the specific details so illustrated and described; but intend covering all constructions and
10 arrangements which fall within the terms employed in the definitions of my invention constituting the appended claims.

What I claim is:

1. A splice bar comprising a girder and a
15 wide foot flange, the outer portion of the foot flange being bent downwardly into the plane of the bottom of a rail for which the bar is designed and then upwardly at a small angle to the horizontal.

20 2. A splice bar comprising a girder and a foot flange extending the entire length of the girder and adapted to fit between the heads and bases of meeting rail ends, said foot flange being relatively wide so as to
25 project a considerable distance beyond the sides of the rail bases, said foot flange having a portion depressed so as to extend below the top of the rail bases, and said portion being inclined upwardly near its outer
30 edge.

3. A splice bar comprising a girder and a foot flange extending throughout the length of the girder, the central portion of said foot flange being bent downwardly to form a truss, and the outer portions of the ends of
35 the foot flange being bent upwardly at a small angle to the horizontal.

4. A splice bar comprising a girder adapted to engage with the underside of the head of a rail and a foot flange extending
40 throughout the length of the girder and adapted to overlie the base of a rail, said foot flange being made wide so as to extend laterally beyond the rail base, and the central portion of the projecting part of the
45 foot flange being forged so as to form a truss comprising a downwardly projecting part having an outwardly projecting part at its lower end, both of said parts being
50 connected to the end portions of the foot flange by webs, the ends of the foot flange being substantially horizontal but being slightly higher at the outer edge than at points nearer the base of the rail.

In testimony whereof, I sign this specification in the presence of two witnesses.

FRANZ EDER.

Witnesses:

JOSEPH FIELL,

JOSEPH A. KELLY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."