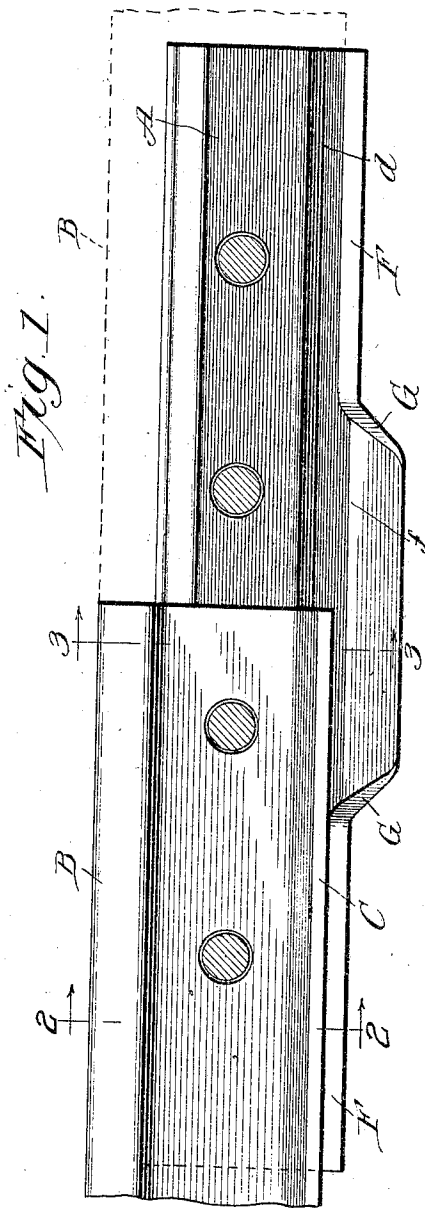
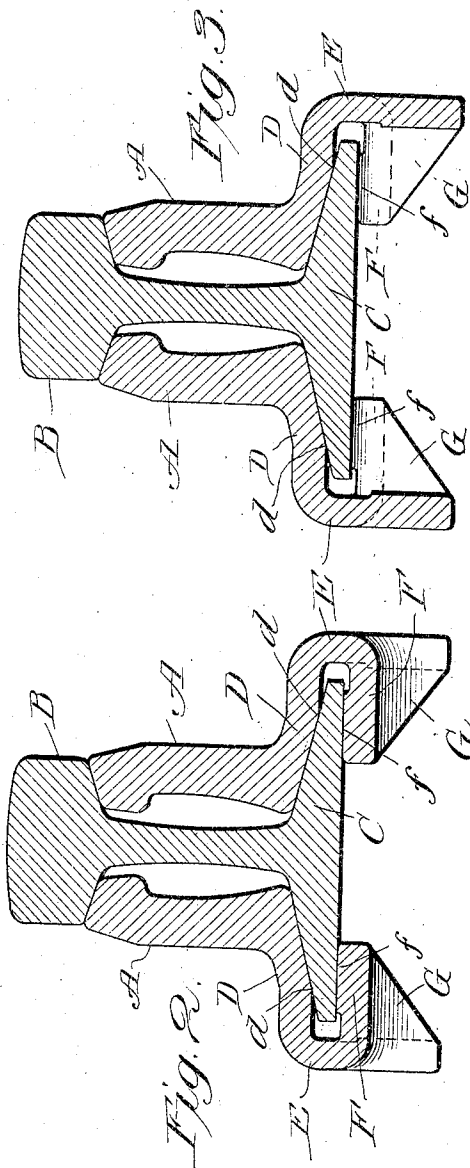


1,003,423.

Patented Sept. 19, 1911.



Witnesses:

*Harry S. Gaither*  
*Ruby V. Byrdges.*

Inventor:

*John A. Bodkin*  
 by *Chamberlins & Freudenreich*  
 attys

# UNITED STATES PATENT OFFICE.

JOHN A. BODKIN, OF NEW YORK, N. Y.

## RAIL-JOINT.

1,003,423.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed May 6, 1910. Serial No. 559,664.

### To all whom it may concern:

Be it known that I, JOHN A. BODKIN, a citizen of the United States, residing at New York, county of New York, 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 has for its object to produce a simple and efficient rail joint which shall embody the features of the so-called continuous joint and of the joint having a downwardly depending truss.

A further object of my invention is to produce a joint of the character specified, the members of which may conveniently be rolled and then shaped by pressure into their final forms.

A further object of my invention is to produce a simple and novel joint which will effectively support the rail ends at points under the head, on the upper side of the base and on the under side of the base.

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 various objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a side elevation of the end of one of two rails to be joined together, illustrating one of my improved splice bars in position, the other rail end being shown in dotted lines; Fig. 2 is a section taken on line 2—2 of Fig. 1; and Fig. 3 is a section taken on line 3—3 of Fig. 1.

My improved joint consists of two splice bars which are bolted in place upon two adjacent rail ends in the usual way. Each of these splice bars consists of an upright member or girder A which is adapted to fit between the head B and the upper side of the base C of the rail ends; a laterally projecting foot plate D which rests upon the top of the rail base and is inclined for a portion of its width so as to follow the contour of the rail base and then extends horizontally from a point *d* between the web of the rail and the edge of the base; and a

flange E which extends in part downwardly and in part beneath the base of the rail. In the arrangement shown, the end portions of the flange as at F are bent inwardly so as to form seats upon which the rail ends may rest; while the central portion of the flange is left undisturbed and serves as a girder or truss which stiffens the joint at the points where the two rail ends meet. In order to give a three-point bearing and at the same time permit of ready adjustment of the splice bars upon the rail ends I so form the parts that the member D projects some distance beyond the edge of the rail base, thereby providing a clearance around each edge of the base and permitting a good bearing surface to be obtained not only under the head and upon the top of the base but also on the underside thereof. To carry these advantages further, I also prefer to thicken the inturned portions of the flange throughout the whole or a part of that portion thereof which lies under the base of the rail, such thickened portion being indicated at *f*. The width of this thickened portion may be varied as desired, my object being to insure clearance between the splice bar and the base of the rail throughout those portions adjacent to the edge of the base. By leaving the outer portion of the foot flange clear of the rail base, a spring effect is produced when the rail base presses down upon the inturned portions of the flange.

In manufacturing the splice bars they are rolled in long sections with the flanges extending at the desired angle to the foot plate, the cross section through the flange and foot plate of each bar being L-shaped; and these sections are then cut up into the desired lengths and the flanges are bulldozed so as to turn portions thereof inwardly to form the base supporting seats. In the arrangement shown the flanges are arranged at right angles to the foot plates; but it will of course be understood that the angle may be anything desired. The thickened portion *f*, of course extends along the entire flange when the splice bars are rolled in the manner described and it therefore serves to stiffen the truss portions and the webs G which connect the truss portions with the inturned portions. In the preferred arrangement the metal adjacent to the meeting edges of the foot plate and the flange is made thinner than the remainder of the splice bar so as to facilitate the bulldozing

of the flange to produce the inturned portions.

It will be seen that when two rails ends are united by splice bars of the type described there will always be a three-point bearing upon each side of each rail end since it is impossible for the splice bars to bind in such a way as to prevent a bearing under the head upon the upper side of the base and on the underside of the base. Furthermore the joint is stiffened at the weak point where the two rail ends meet.

It will also be seen that the inturned portions of the flange not only support the rail ends so as to make the joint more secure but they also protect the ties at these points.

While I have illustrated and described in detail only a single preferred form of my invention, I do not desire to be limited to this particular form but intend to cover all constructions and arrangements which fall within the terms employed in the definitions of my invention constituting the appended claims.

What I claim is:

1. A connecting plate for a rail joint formed of a rolled member comprising a girder adapted to fit between the base and the head of a rail and a laterally-extending foot flange adapted to overlie the base of the rail, a portion of said foot flange being bent downwardly to form a truss along one edge of the rail base and adjacent portions of the foot flange being bent inwardly to underlie and engage with the underside of the rail base, said foot flange having a rib extending along its free edge so as to form a stiffening member along the edge

of the truss and rail-supporting members on the portions of the foot flange which are bent inwardly.

2. A connecting plate for a rail joint formed of a rolled member comprising a girder adapted to fit between the base and the head of a rail and a laterally-extending foot flange adapted to overlie the base of the rail, a portion of said foot flange being bent downwardly to form a truss and adjacent portions of the foot flange being bent inwardly to underlie and engage with the underside of the rail base, said foot flange having a rib extending along its free edge so as to form a stiffening member along the edge of the truss and rail-supporting members on the portions of the foot flange which are bent inwardly.

3. A connecting plate for a rail joint formed of a rolled member comprising a girder adapted to fit between the base and the head of a rail and a laterally-extending foot flange adapted to overlie the base of the rail, a portion of said foot flange being bent downwardly and inwardly to underlie and engage with the under side of the rail base, the latter portion of said foot flange having a rib projecting upwardly along its free edge to engage with the rail base, said foot flange decreasing gradually in thickness to a point where it extends inwardly under the rail base.

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

JOHN A. BODKIN.

Witnesses:

C. C. KISLER,  
J. V. WESCOTT.