

A. L. STANFORD.
RAIL JOINT.
APPLICATION FILED MAR. 8, 1909.

944,349.

Patented Dec. 28, 1909.

Fig. 1.

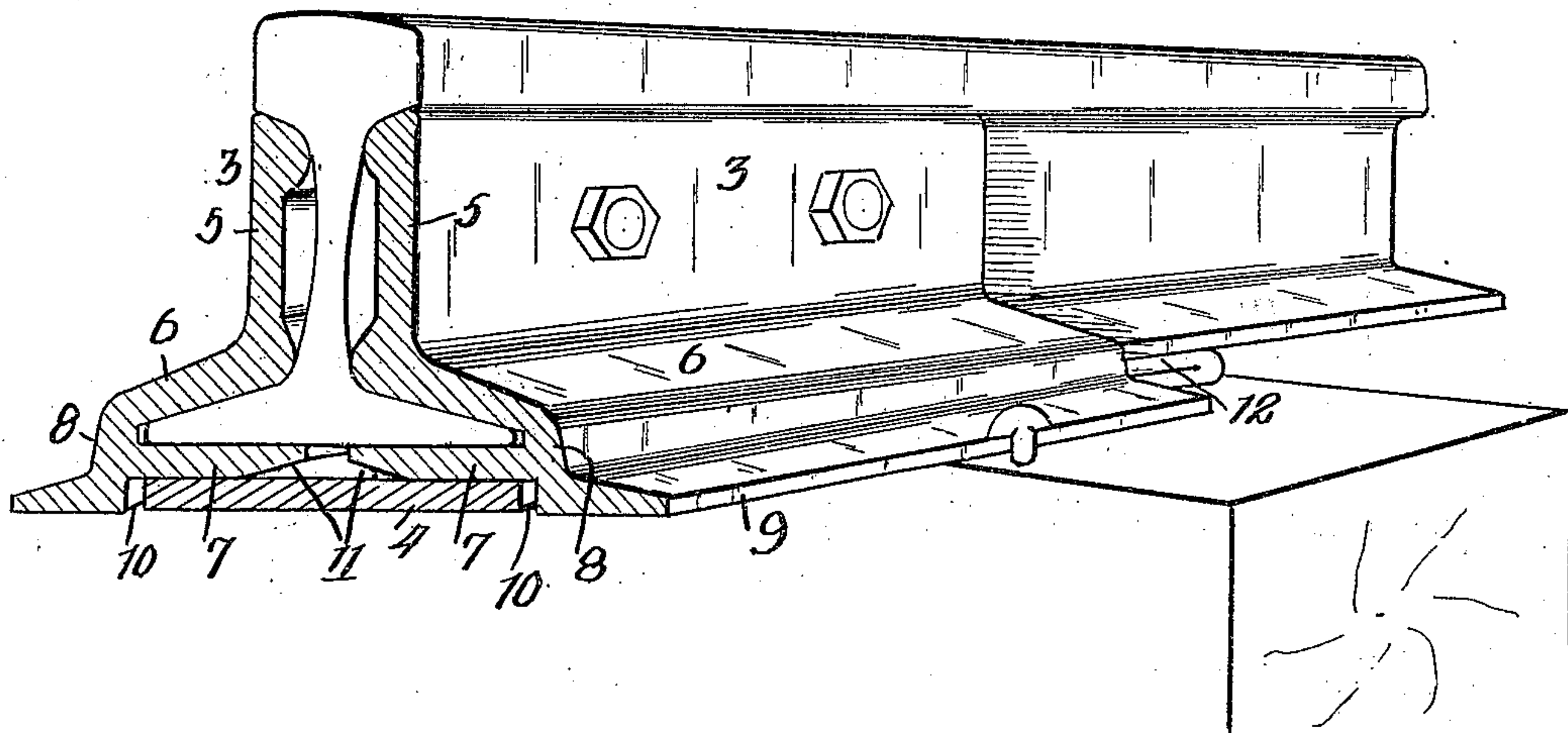


Fig. 2.

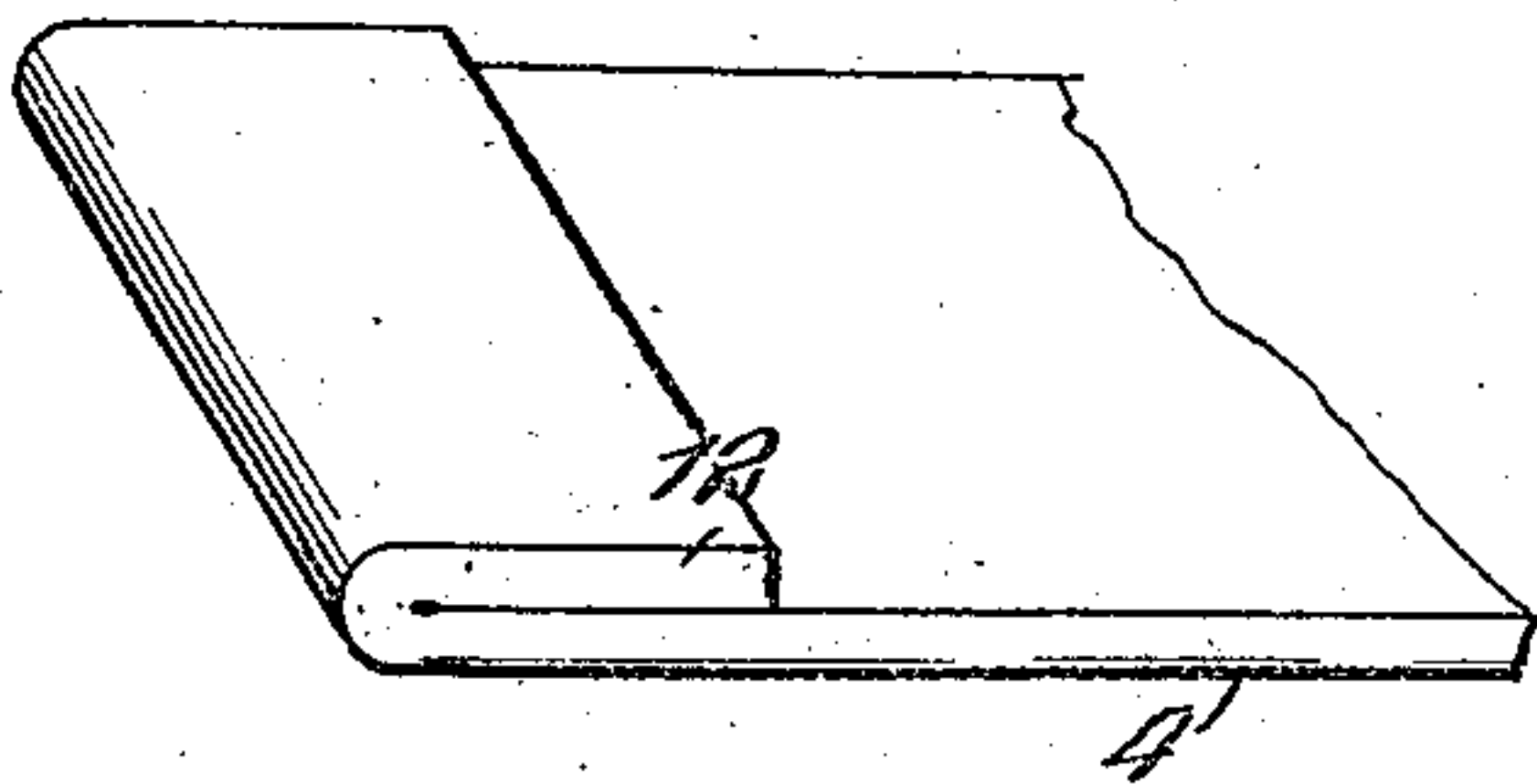
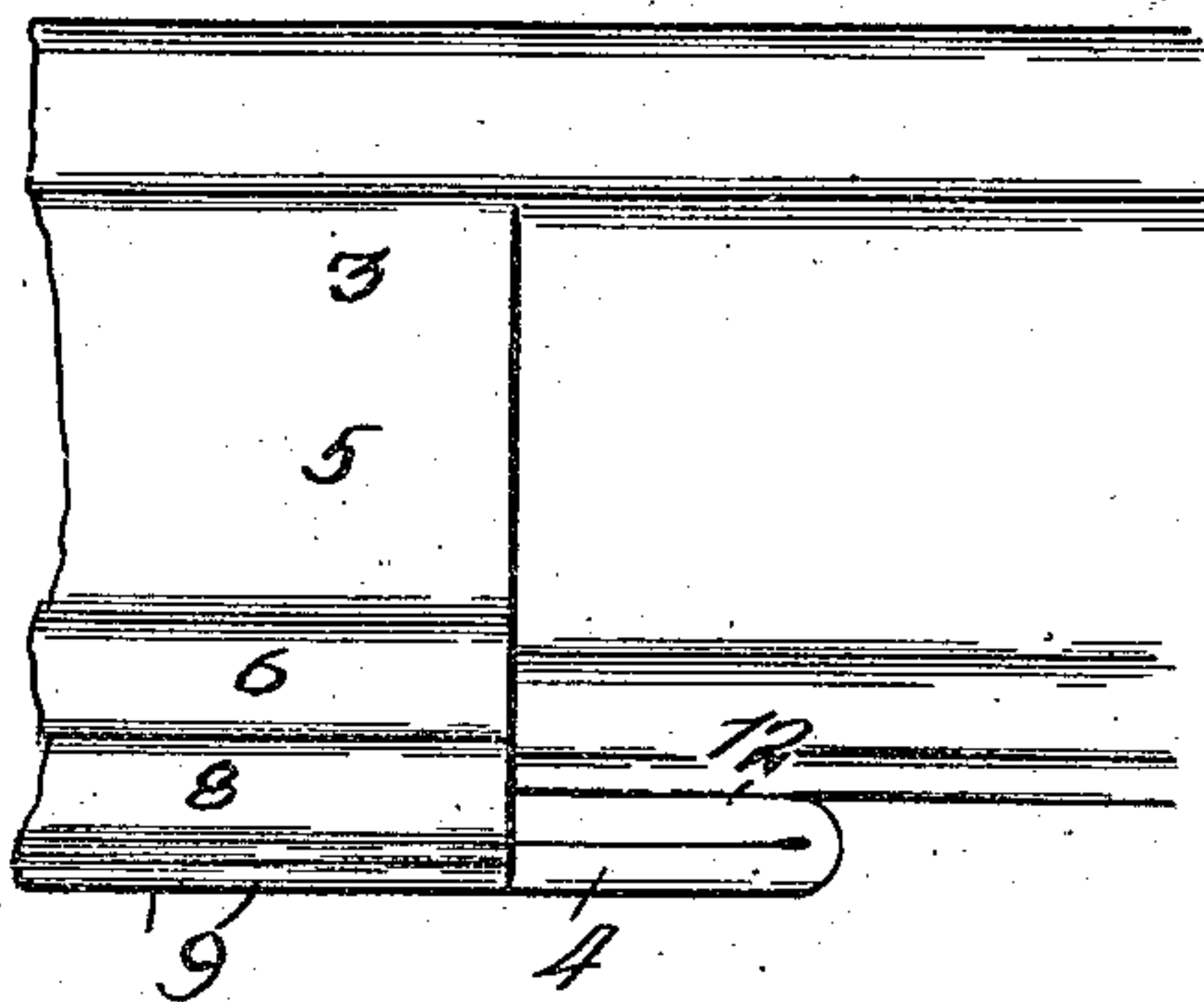


Fig. 3.



Witnesses:

Wm. P. Bond

Carson W. Lanning.

Inventor:
Arthur L. Stanford

by *Banning & Banning*
Attys.

UNITED STATES PATENT OFFICE.

ARTHUR L. STANFORD, OF CHICAGO, ILLINOIS.

RAIL-JOINT.

944,349.

Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, ARTHUR L. STANFORD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention relates to a three-piece rail joint; and the object of the invention is to so construct the rail joint that the length of the splice bars may be reduced to a minimum without sacrificing the strength of the joint or the support afforded by the ties. This object is accomplished by the use of a base plate of a length sufficient to secure a full bearing surface on the joint ties, which plate furnishes a foundation for a pair of splice bars of lesser length, whereby a very considerable saving is effected in the weight of material employed, which is of great importance in the art to which the present invention relates.

The invention is adapted more particularly for use in forming what are known as suspended joints, in which the ends of the abutting rail sections lie immediately between the ties. In the formation of suspended joints, it is desirable that the members of the joint find a bearing across the entire width of the joint ties, in order to reduce the wearing of the ties as much as possible. It is not necessary, however, that the rail gripping portions of the joint members should extend to this extreme distance, provided the requisite supporting surface be otherwise obtained, and the base plate of the present invention serves to afford the requisite support.

Further objects will appear from a detailed description of the invention, which consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of one-half of a rail joint; Fig. 2 a perspective detail of one end of the base plate; and Fig. 3 a side elevation of the rail joint.

The joint as a whole comprises a pair of splice bars 3 and a supporting plate 4. Each of the splice bars comprises a vertical body portion 5, a lateral flange 6, and an inturned base flange 7, which parts are standard as regards their general arrangement. The lateral flange and base flange are connected by a web 8 which furnishes a groove

or channel to receive the flange of the rail, and the web is carried down below the level of the base flange and is preferably offset to furnish a spiking flange 9, the arrangement being one which affords an underlying channel 10 for the reception of the base plate. Each of the inturned flanges 7 is beveled on the under face of its inner edge 11, and the inner edges are preferably formed to terminate outside of the center of the rail, leaving the center unsupported for the purpose of increasing the resiliency of the joint as a whole. The ends of the base plate project beyond the ends of the splice bars, and each of the ends is turned back to afford a stop or shoulder 12, which stops or shoulders abut against the ends of the splice bars and at the same time thicken the ends of the base plate sufficiently to afford a support for the rail at each end of the splice bars. The base plate is preferably of a thickness equal to that of the inturned flanges, so that by bending back the ends of the base plate in the manner shown the upper surface of the ends will lie flush with the upper surface of the base flanges longitudinally adjacent thereto. The base plate is preferably of a length to extend completely across the two joint ties, so that a full bearing surface is afforded, whereas the splice bars need only be of a length to secure a firm support for their ends on the joint ties to which they are spiked. When the joint is complete, the base plate will be locked in position, both against longitudinal and lateral movement, and the joint as a whole will possess elements of great strength and permanence. At the same time a desirable resiliency is secured by the under beveling of the base flanges, which graduates the resiliency in an increasing degree toward the center, which is desirable, in that it reduces pounding and increases the life of the joint.

Although the web 8 is shown as having formed thereon a laterally extending spiking flange, this flange might be eliminated and the web carried straight down, if desired, without changing the character of the invention in any material respect.

What I regard as new and desire to secure by Letters Patent is:

1. In a rail joint, the combination of two splice bars, each comprising a body portion, a lateral flange and an inturned base flange, a supporting plate of greater length than

the splice bars and underlying the base flanges, and having each of its ends of increased thickness to furnish a bearing surface for the rail and afford a stop or abutment to engage the ends of the adjacent base flanges to prevent longitudinal movement, substantially as described.

2. In a rail joint, the combination of two splice bars, each comprising a body portion, a lateral flange and an inturned base flange, a supporting plate of greater length than the splice bars and underlying the base flanges, and having each of its ends doubled back to afford a thickened portion adapted to support the rail and furnish an abutment for the adjacent ends of the base flanges for preventing longitudinal movement, substantially as described.

3. In a rail joint, the combination of a pair of splice bars, each comprising a body portion, a laterally extending flange and an inturned base flange, each of the splice bars having near its outer edge a depending portion adapted to bear upon the tie, leaving a groove or channel intermediate such depending portions, and a base plate entered in said groove or channel, substantially as described.

4. In a rail joint, the combination of a pair of splice bars, each comprising a body portion, a laterally extending flange and an inturned base flange, each of the splice bars having near its outer edge a depending portion adapted to bear upon the tie, leaving a groove or channel intermediate such depending portions, and a base plate entered in said groove or channel and of greater length than the splice bars, substantially as described.

5. In a rail joint, the combination of a pair of splice bars, each comprising a body portion, a laterally extending flange and an inturned base flange, each of the splice bars having near its outer edge a depending portion adapted to bear upon the tie, leaving a groove or channel intermediate such depending portions, and a base plate entered in said groove or channel and of greater length than the splice bars, and having its ends thickened throughout their width to furnish bearing surfaces for the rail and stops or abutments for preventing longitudinal movement, substantially as described.

6. In a rail joint, the combination of a pair of splice bars, each comprising a body portion, a laterally extending flange and an inturned base flange, each of the splice bars having near its outer edge a depending portion adapted to bear upon the tie, leaving

a groove or channel intermediate such depending portions, and a base plate entered in said groove or channel and of greater length than the splice bars, and having each of its ends turned back to afford a thickened portion adapted to support the rail and furnish a stop or abutment for preventing longitudinal movement, substantially as described.

7. In a rail joint, a splice bar provided with an inturned base flange having its upper side or rail supporting surface level to bear flatly against the bottom of the rail, and having its inner edge beveled on its under side to reduce the thickness of the inner edge of the flange, and a base plate underlying the base flange, substantially as described.

8. In a rail joint, the combination of a splice bar having an inturned base flange and a base plate of greater length than the splice bar upon which the base flange is supported, said base plate being thickened at its ends to form stops or abutments for preventing longitudinal movement and furnish an additional support for the rail, substantially as described.

9. A rail joint comprising a pair of splice bars, each provided with an inturned base flange having its upper side or rail supporting surface level to bear flatly against the bottom of the rail and being beveled away on its under inner edge to reduce the thickness of the inner edge of the flange, and a base plate underlying the base flanges, substantially as described.

10. A rail joint comprising a pair of splice bars, each provided with an inturned base flange having its upper side or rail supporting surface level to bear flatly against the bottom of the rail and being beveled away on its under inner edge to reduce the thickness of the inner edge of the flange, and a base plate underlying the base flanges and of greater length than the splice bars, substantially as described.

11. In a rail joint, a splice bar provided with an inturned base flange having its upper side or rail supporting surface level to bear flatly against the bottom of the rail and having its inner edge beveled on its under side to reduce the thickness of the inner edge of the flange, substantially as described.

ARTHUR L. STANFORD.

Witnesses:

PIERSON W. BANNING,
WM. P. BOND.