No. 760,337. PATENTED MAY 17, 1904.

B. KRAUS.

RAIL JOINT.

APPLICATION FILED JAN. 27, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

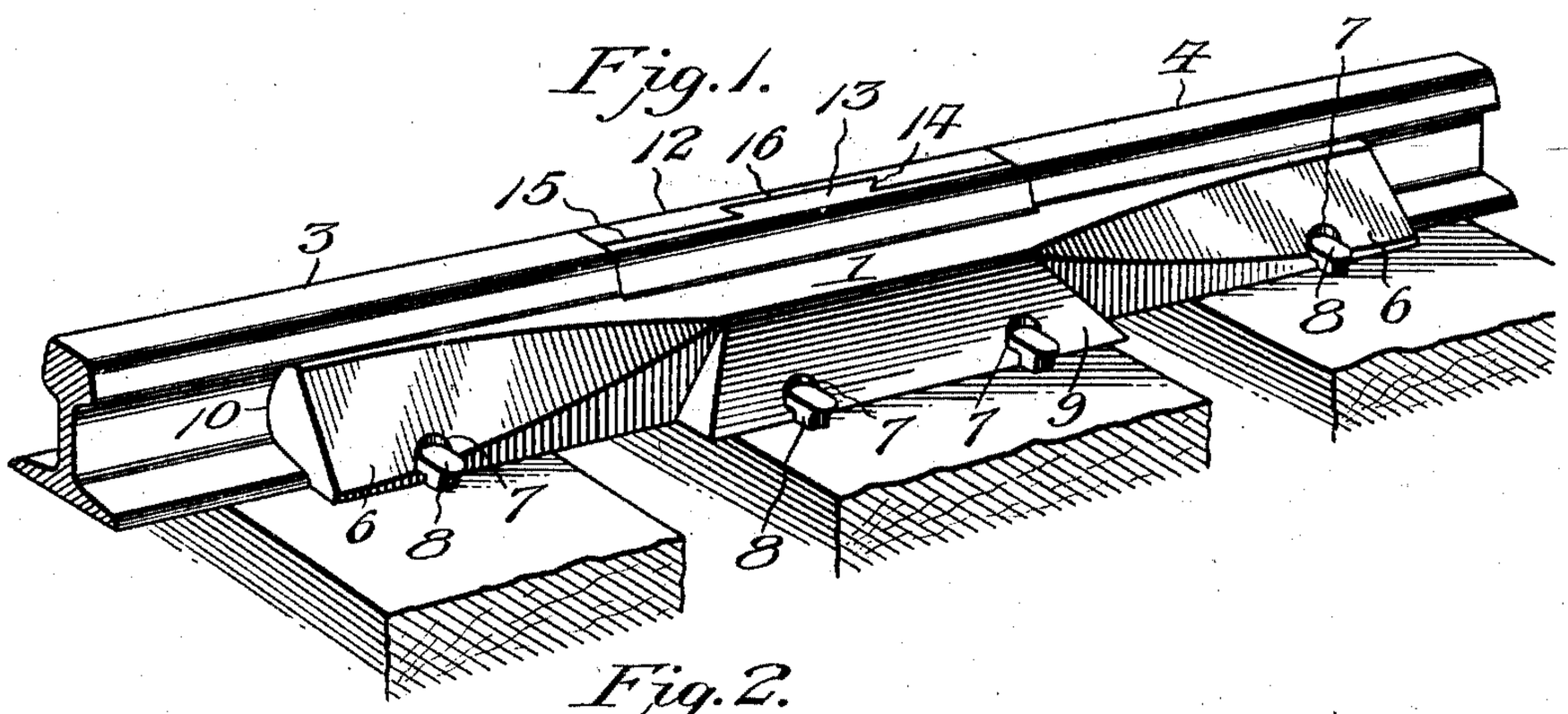


Fig. 2.

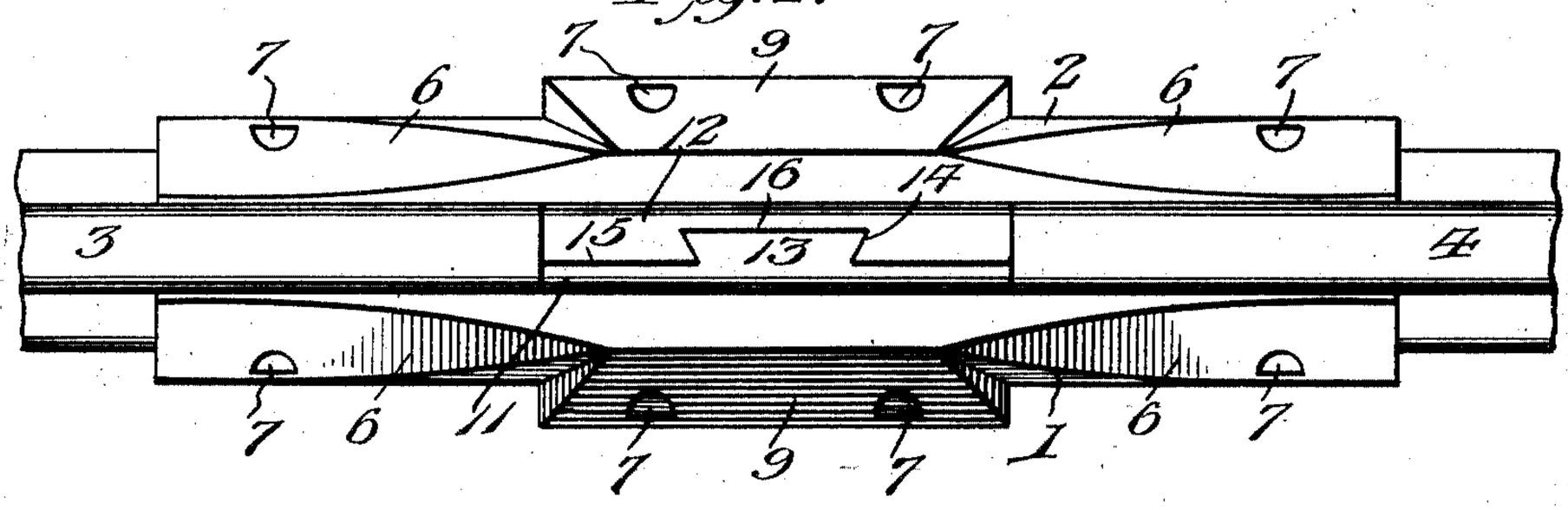
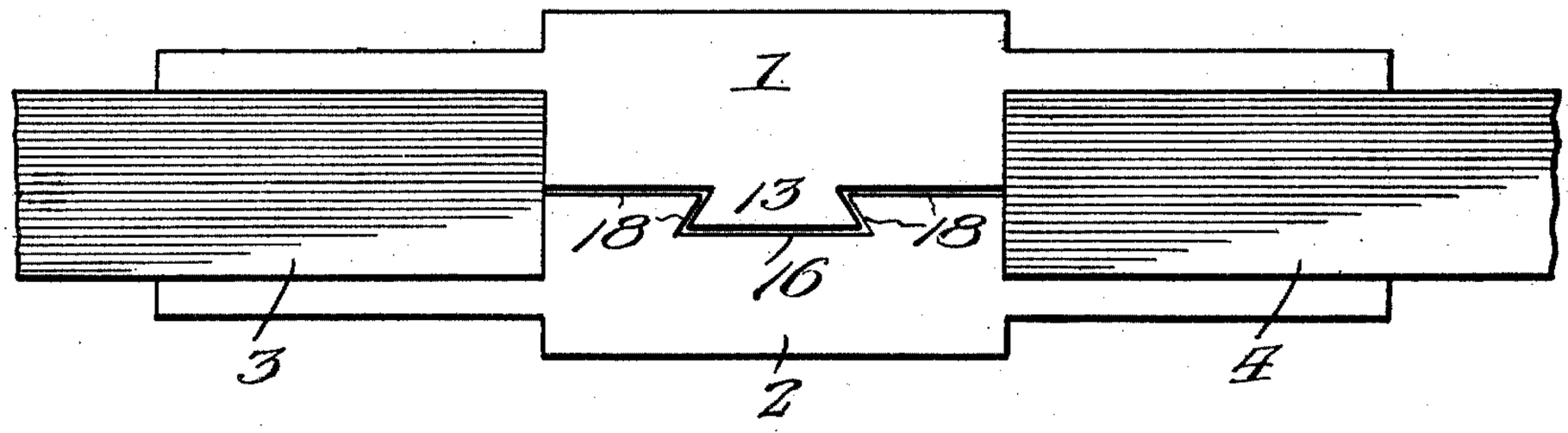


Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

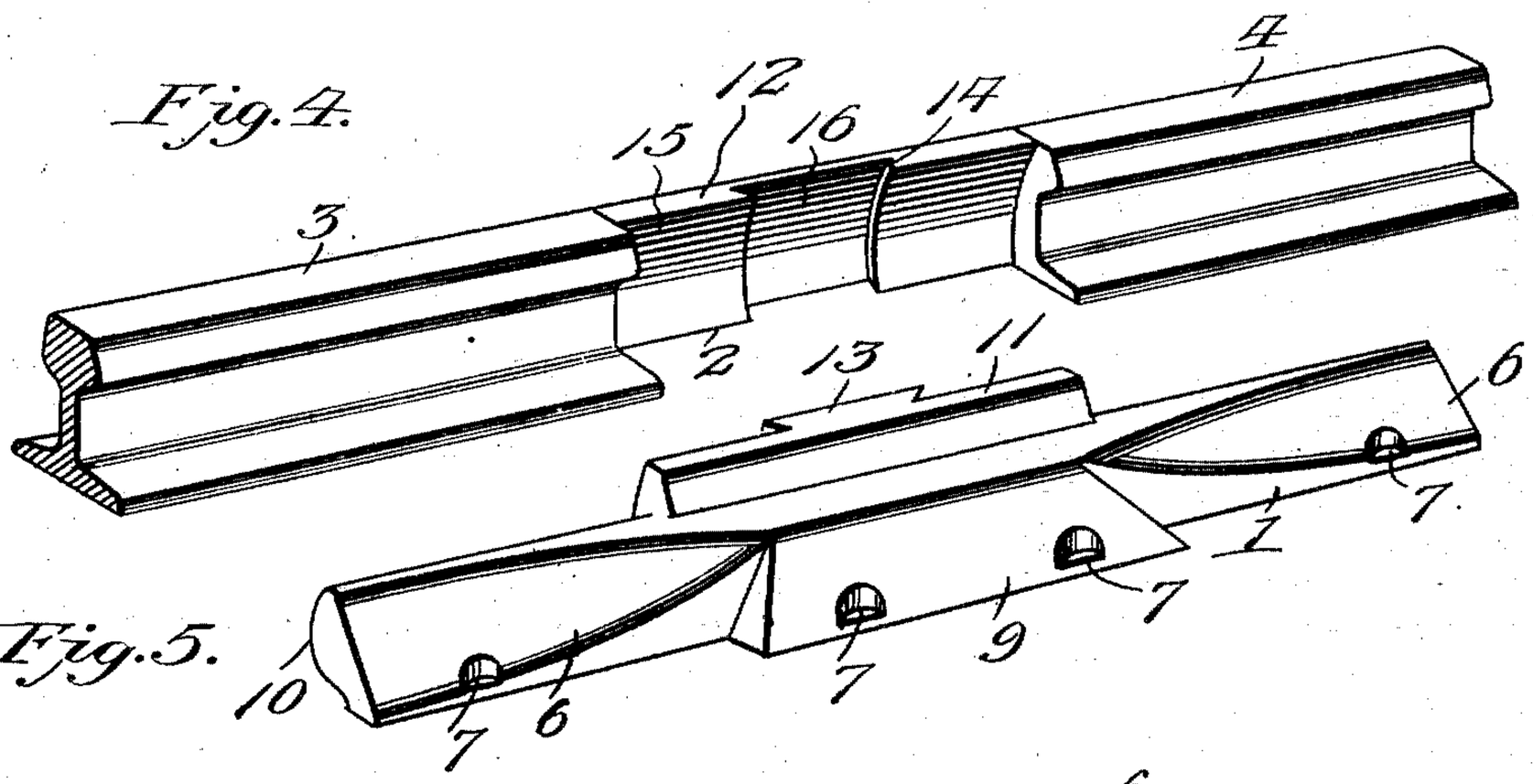


Fig. 5.

Fig. 6.

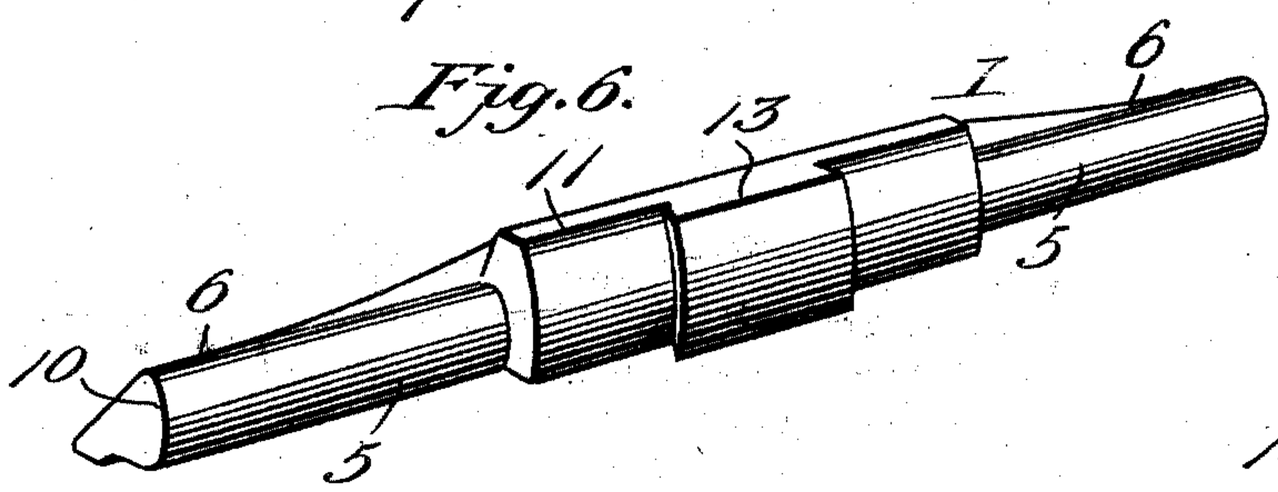


Fig. 7.

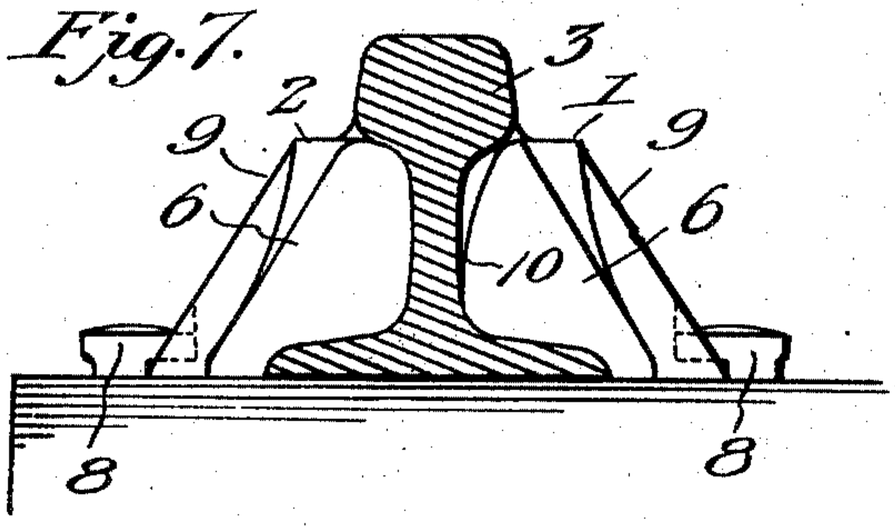


Fig. 8.

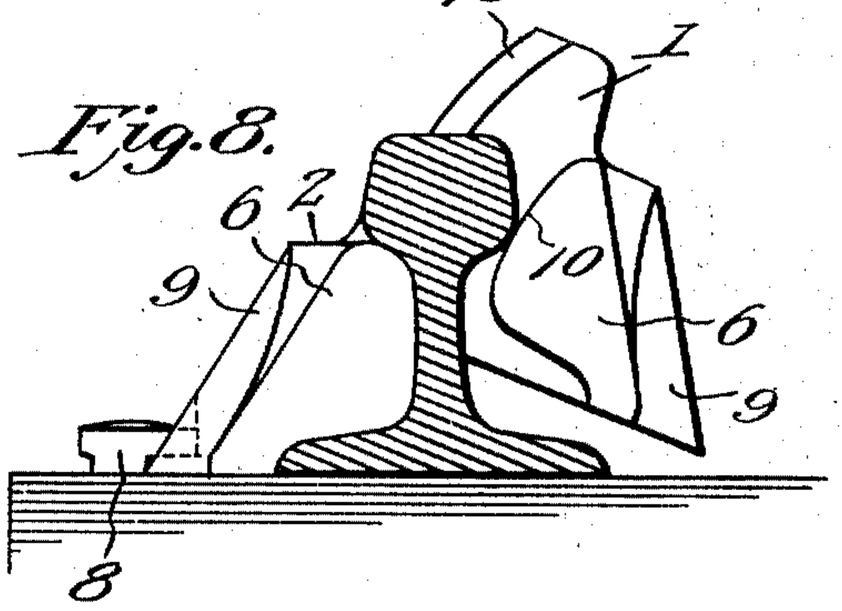
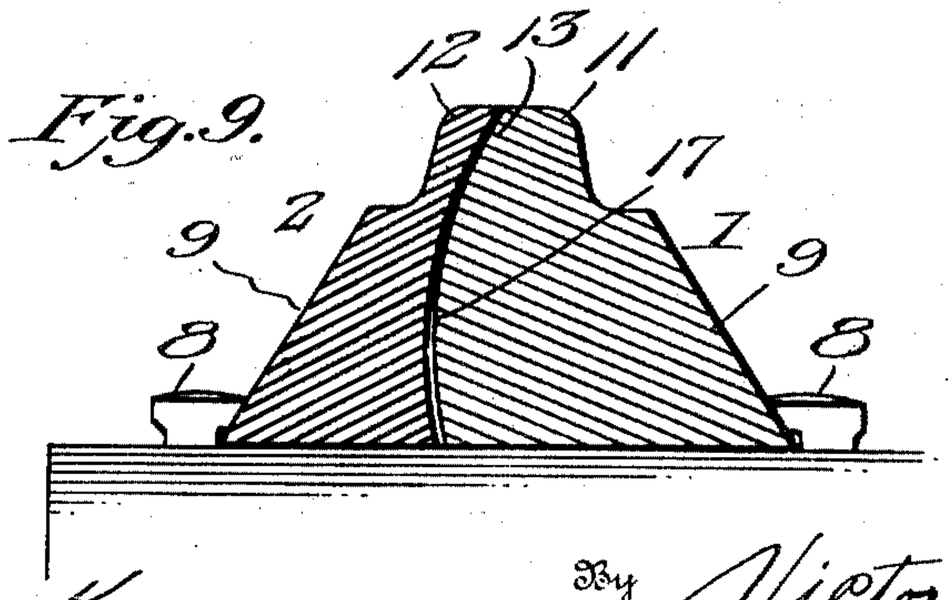


Fig. 9.



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UNITED STATES PATENT OFFICE.

BURNIE KRAUS, OF PITTSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 760,337, dated May 17, 1904.

Application filed January 27, 1904. Serial No. 190,846. (No model.)

To all whom it may concern:

Be it known that I, BURNIE KRAUS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints, the object in view being to provide novel and effective means for joining and bracing the adjacent ends of railway-rails in such manner as to do away with the use of bolts and nuts and at the same time firmly connect the ends of the rails, so that they are thoroughly braced and expansion and contraction provided for.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully illustrated, described, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a rail-joint complete. Fig. 2 is a plan view thereof. Fig. 3 is a bottom plan view of the same. Fig. 4 is a detail perspective view of the joint with one of the splice-bars removed. Fig. 5 is a perspective view of one of the splice-bars. Fig. 6 is a perspective view of the splice-bar shown by Fig. 5 in reverse position. Fig. 7 is an end view of the rail-joint, showing a rail in section. Fig. 8 is a similar view showing the manner of connecting and disconnecting the splice-bars. Fig. 9 is a cross-section taken through the central portion of the joint between the rail ends.

Like reference-numerals designate corresponding parts in all the figures of the drawings.

The rail-joint contemplated in this invention comprises but two pieces or members 1 and 2, shown, respectively, in detail in Figs. 5 and 6 and shown applied, in Figs. 1, 2, and 3, to the extremities of the rails, which are indicated at 3 and 4, said rails being of the usual construction now in common use. The rail-joint members or splice-bars 1 and 2 may be made of any desired length and are preferably constructed to extend across several ties, as shown in Fig. 1. The main body portions of the splice-bars are shaped to conform to the opposite sides of the rails, as shown in Figs. 7 and 8, so as to bear against the webs of the rails and also against the base-flanges and heads of the rails.

The joint member or splice-bar 2 has the inner surface of its body portion rounded, as shown at 5, so as to conform exactly to the shape of the rail, as shown in Figs 7 and 8, whereby it bears firmly against the web of the rail and also against the lower side of the rail-head and also against the base-flange of the rail. The outer surface of the body portion is cut away or chamfered, as shown at 6, and provided in its outer edge with notches or seats 7 to receive the inturned heads of the ordinary railway-spikes 8, as best illustrated in Figs. 1, 7, and 8. The splice-bar 2 is further provided with a central outward offset 9, also beveled and provided with other notches or seats 7 similar to those above described and for a like purpose. The other splice-bar, 1, corresponds in every way with the splice-bar 2, except that the rounded inner surface of the body portion thereof, as shown at 10, is described on a different arc, so that in assembling the two parts of the joint or bringing together the two splice-bars said rounded surface 10 will not be interfered with by the head of the rail, but will ride past the same, as indicated in Fig. 8, so as to allow the body portion of the splice-bar to be positioned in the manner illustrated in Fig. 7, wherein it will be observed that when the splice-bar 1 is in place it bears firmly against the web and base of the rail and also has a bearing against the under side of the rail-head, the rail being thus firmly held between the two splice-bars, thus keeping the ends of the rails in alinement and bracing the same relatively to each other. The splice-bar 1 is provided with notches or seats 7 for the reception of the heads of the securing-spikes, which are driven into the ties in the usual manner.

The two splice-bars 1 and 2 are provided intermediate their ends with central inward offsets or abutments 11 and 12, which may be of any desired length, generally of about one foot, the said offsets or abutments fitting between the extremities of the rails, as clearly shown in Figs. 1, 2, and 3. One of said off-

sets or abutments is provided with a dovetailed rib or projection 13, while the other one is provided with a correspondingly-shaped recess or groove 14 to receive the projection or tongue 13. The meeting faces 15 and 16 of the offsets or abutments are described on the arc of a circle, as shown at 17, the purpose of which is to adapt the member 1 to be coupled with the member 2 by pushing the same downward, as shown in Fig. 8, after engaging the interlocking parts 13 and 14 with each other. By reference to Fig. 2 it will be noticed that the offsets or abutments 11 and 12 fit snugly together at the top of the joint, while at the bottom a space 18 (shown in Fig. 3) is left to provide for the necessary expansion and contraction due to changes in the weather, and by reference to Fig. 9 it will be noticed that the space between the interlocking parts of the joint members gradually increases from the top of the rail-joint to the bottom thereof. It will thus be seen that the joint members or splice-bars are provided with interlocking parts which occupy a position between the extremities of the rails and which serve to hold the body portions of the splice-bars snugly against the sides of the rail extremities, thus maintaining the alinement between the rails and the inward offsets or abutments of the members or splice-bars of the joint.

By means of the construction hereinabove described threaded bolts and nuts are dispensed with, and it is obviously unnecessary to provide the rail ends with holes to receive such bolts.

Having thus described the invention, what is claimed as new is—

1. In a rail-joint, oppositely-located splice-bars having interlocking portions which project inwardly toward each other and lie between the adjacent extremities of the rails, one of said portions having a rib and the other a rest to receive said rib, the rib being slidable vertically in relation to the recess.

2. In a rail-joint, oppositely-located splice-bars having body portions which engage the sides of the rail ends, and inwardly-extending abutments which lie between the extremities of the rails and interlock with each other, substantially as described.

3. In a rail-joint, oppositely-arranged splice-bars extended to engage the sides of the rails and provided with central inward offsets or abutments which interlock with each other and form an interposed continuation of the rails, substantially as described.

4. In a rail-joint, oppositely-arranged splice-bars provided intermediate their ends with inward offsets or abutments having an interlocked engagement with each other and embodying correspondingly-curved meeting faces which adapt the interlocking members to be slid into engagement with each other, substantially as described.

5. In a rail-joint, oppositely-arranged splice-bars provided intermediate their ends with inwardly-extending abutments which lie between the rail extremities and are provided with interlocking portions, the meeting faces and interlocking portions of the abutments being described on the arc of a circle so as to permit the splice-bars to be associated and disconnected by sliding the interlocking parts into and out of engagement with each other, substantially as described.

6. In a rail-joint, oppositely-arranged splice-bars provided with inwardly-extending offsets or abutments which lie between the rail extremities and are provided with interlocking portions, the meeting faces of which are curved in convex and concave form to adapt said parts to be slid laterally into and out of engagement with each other, one splice-bar having its body portion shaped to fit accurately one side of the rail, and the other body portion being rounded on a pitch which will admit of the same passing by the head of the rail in the act of engaging the same with or disengaging the same from the opposite splice-bar, substantially as described.

7. In a rail-joint, the combination with the ends of adjoining rails, of oppositely-arranged splice-bars engaging the opposite sides of the rails and provided with inwardly-extending offsets or abutments which lie between the rail ends and interlock with each other, and means for fastening the splice-bars to the ties so as to hold the splice-bars in interlocked engagement with each other.

In testimony whereof I affix my signature in presence of two witnesses.

BURNIE KRAUS.

Witnesses:
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CHARLES C. PORTER.