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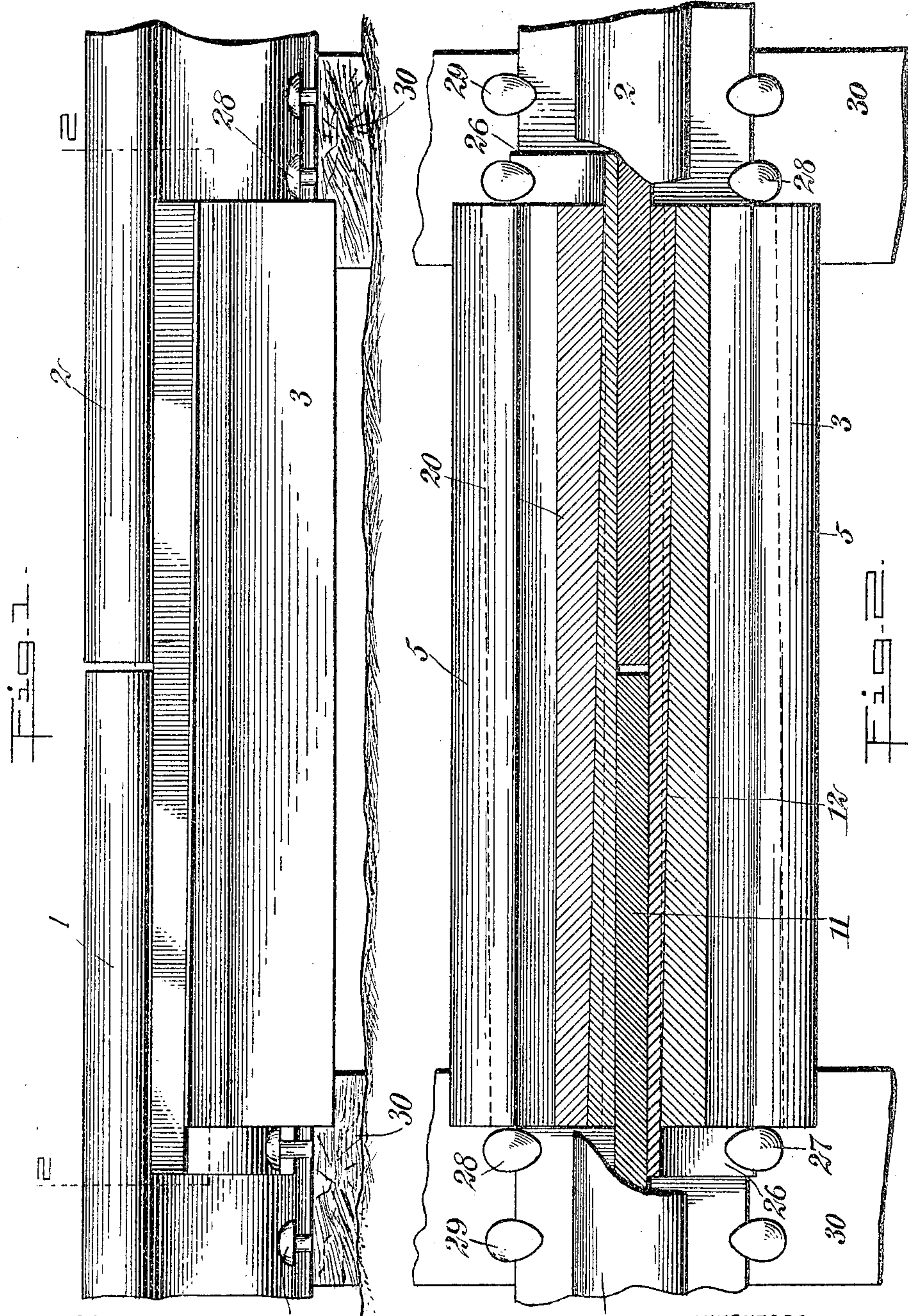
PATENTED DEC. 26, 1905.

J. W. & E. J. ENRIGHT.

RAIL JOINT.

APPLICATION FILED MAY 23, 1905.

2 SHEETS—SHEET 1.



WITNESSES:
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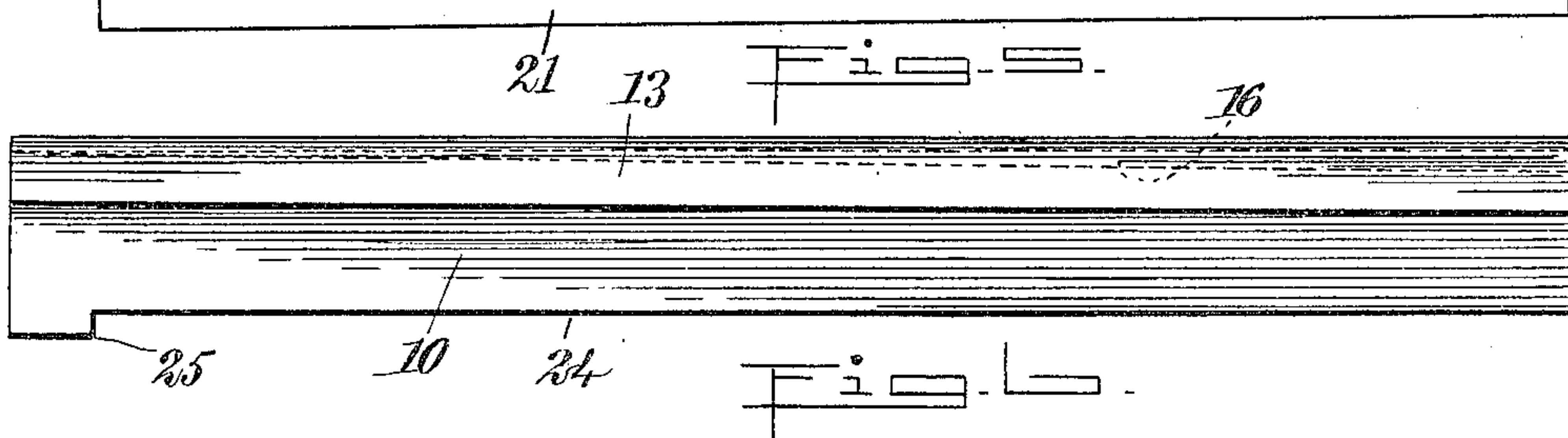
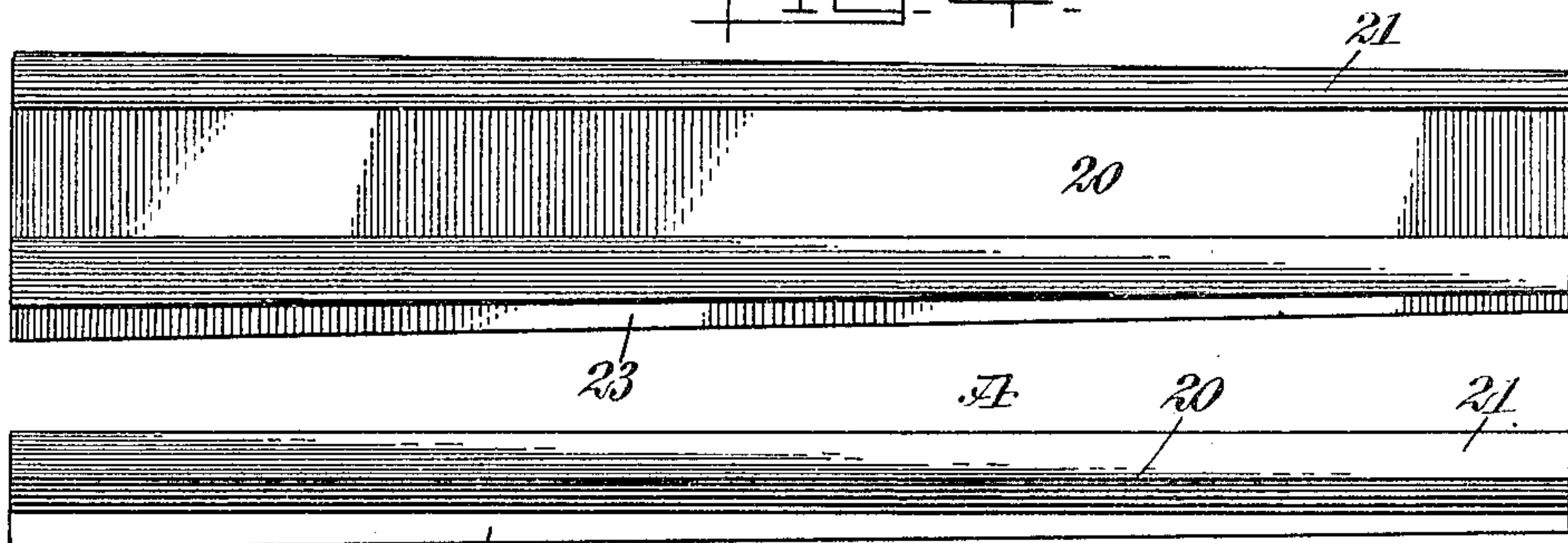
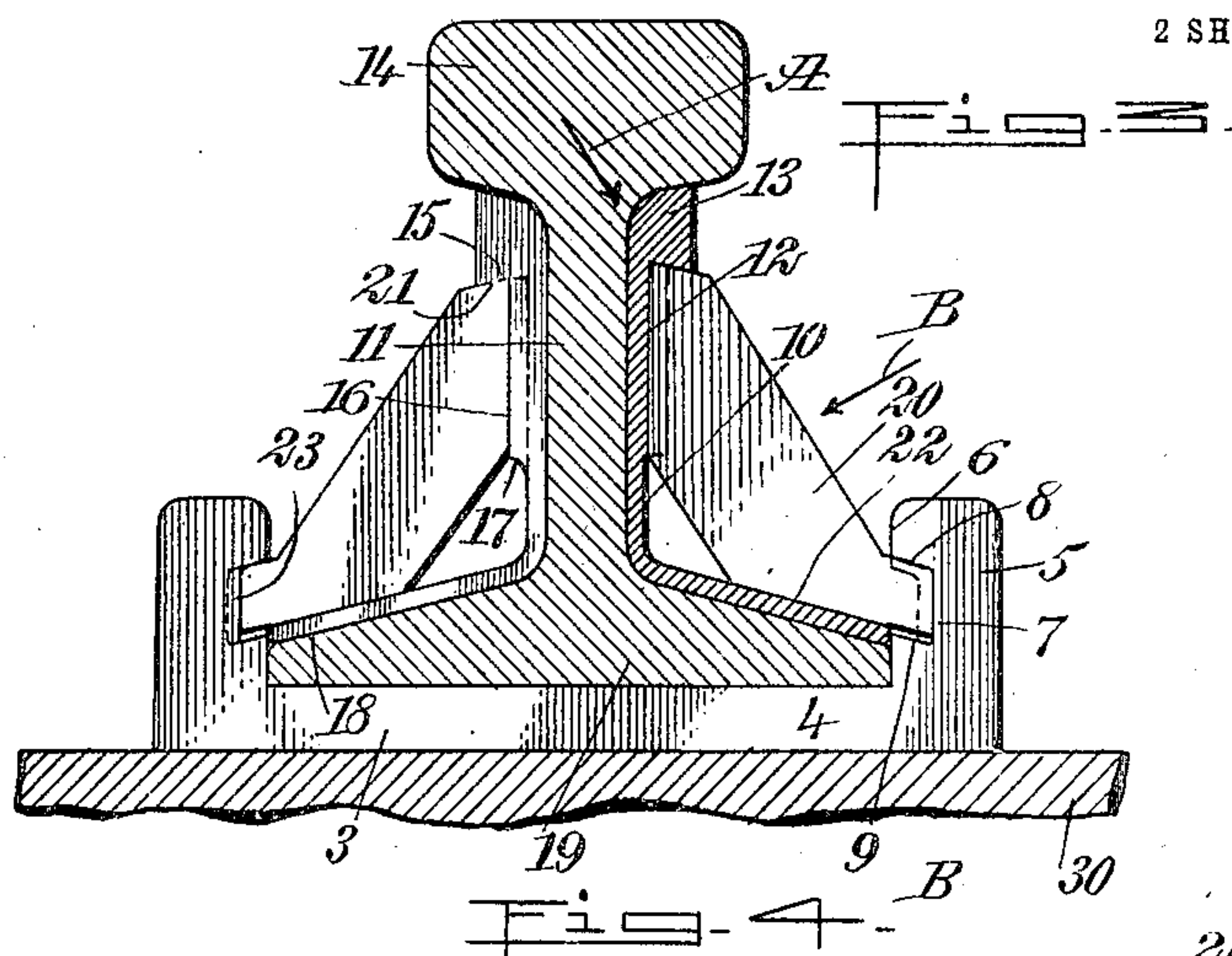
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UNITED STATES PATENT OFFICE.

JOHN W. ENRIGHT AND EDWARD J. ENRIGHT, OF NEW ORLEANS,
LOUISIANA.

RAIL-JOINT.

No. 808,524.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed May 23, 1905. Serial No. 261,738.

To all whom it may concern:

Be it known that we, JOHN W. ENRIGHT and EDWARD J. ENRIGHT, citizens of the United States, and residents of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Rail-Joint, of which the following is a full, clear, and exact description.

This invention relates to railway construction, and concerns itself especially with rail-joints.

The object of the invention is to produce a rail-joint of simple form which will operate without necessitating the use of bolts and nuts to hold the abutting ends of two rails firmly together.

The invention consists in the construction and combination of parts to be more fully described hereinafter and definitely set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

In the drawings, which fully illustrate our invention, Figure 1 is a side elevation showing the abutting extremities of two adjacent rails to which our joint has been applied. Fig. 2 is a section taken substantially upon the line 2 2 of Fig. 1. Fig. 3 is a vertical cross-section through the rail-joint. Fig. 4 is a side elevation of a wedge-plate which constitutes a feature of the invention. This wedge-plate is shown in Fig. 3 and in Fig. 4 is represented as projected upon a plane at right angles to the direction of the arrow B. Fig. 5 is a plan or edge view of this wedge-plate projected upon a plane at right angles to the direction of the arrow A shown in Fig. 3, and Fig. 6 is a plan of a fish-plate which constitutes a feature of the invention.

Referring more particularly to the parts, 1 and 2 represent the abutting extremities of two adjacent rails. In forming the joint we provide a socket-plate 3, which is of elongated rectangular form, as indicated, presenting a substantially flat body 4 with upwardly-projecting side flanges 5. The inner faces 6 of these side flanges are undercut, as shown, so as to form inclined recesses 7, which extend continuously from end to end of the socket-plate, as will be readily understood. The upper and lower edges 8 and 9

of these recesses or grooves are preferably parallel, as indicated, and incline upwardly in the direction of the rails. We provide also a pair of fish-plates 10 of angular form, as shown, which are adapted to be applied to the webs 11 of the rails, as indicated, conforming to the outline of the rail. The vertical members or webs 12 of these fish-plates are enlarged above, so as to form heads 13, which fit into the fillets or angles between the under sides of the rail-heads 14 and the webs 11 thereof. The under sides of these heads 13 are undercut, as shown, so as to present inclined shoulders 15, which extend continuously from end to end of the fish-plates, as will be readily understood. Beneath the shoulders 15 the webs 12 for a portion of their height are thickened toward one extremity of the fish-plate so as to present inclined wedge-faces 16. At one extremity these faces 16 become substantially flush with the outer face of the web, as indicated at the right in Fig. 3, while at the other extremity the wedge-face is removed sufficiently to present a shoulder 17 on its under edge. The flanges 18 of the fish-plates lie closely upon the rail-flanges 19, and their edges substantially aline with the edges of the rail-flanges, as indicated.

As indicated in Fig. 3, the lower edges 9 of the longitudinal grooves 7 in the socket-plate are disposed intermediate of the upper edges of the fish-plate flanges and the upper edges of the rail-flanges, so that the upper faces of the flanges 18 project above the edges 9, as will be readily understood.

In forming the joint the fish-plates are applied on each side of the webs of the rails, as indicated, the flange of the rail lying in the socket-plate 3, as shown. The fish-plates are firmly secured in position by means of wedge-plates 20, which are disposed in an inclined relation, as shown, being disposed longitudinally of the joint. The upper edges of these wedge-plates are beveled to an acute angle, as indicated at 21, and these upper edges are received under the shoulders 15. In this way the upper sides of the wedge-plates present cheeks which lie substantially against the inclined faces 16 and the shoulder 15, enabling the wedge-plate to exert an upward and lateral thrust against the fish-plates. The lower edges of the wedge-plates are formed with inclined faces 22, which lie upon the upper faces

of the flanges 18, and at these points the wedge-plates are formed with outwardly-projecting beads or tongues 23, which are received in the aforesaid groove 7. These beads
 5 23 taper longitudinally to correspond with the grooves 7, which are tapered likewise. From this arrangement it follows that if the wedge-plates are properly proportioned and forced into position they will operate effectively to clamp the fish-plates against the
 10 sides of the rails.

The fact referred to above that the flanges 18 project above the lower edges 9 of the groove 7 is important in that it insures that a
 15 pressure will be developed downwardly upon the upper sides of the flanges 18, so as to press the same against the rail-flanges. If this provision were not made, the beads 23 might jam in the groove 7 before the clamping effect at this point were produced.

In order to limit the inward movement of the fish-plates when they are inserted longitudinally into position in forming the joint, their outer edges 24 are preferably formed
 25 near one extremity with a projecting shoulder 25, which is adapted to abut against the extremity of the socket-plate in such a way as to leave a projecting portion 26, as indicated in Fig. 2. At these projecting portions
 30 26 spikes 27 are applied, as indicated in Figs. 1 and 2, and other spikes 28 are driven opposite to these, as shown. In addition to this other spikes 29 are preferably employed, all of said spikes passing into the ties 30, which
 35 support the joint.

The rail-joint described is evidently of very simple construction and affords means for holding the abutting extremity of the rails very rigidly, at the same time there is no necessity for the employment of bolts or nuts
 40 for securing the parts together.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. A rail-joint comprising, in combination, 45 a socket-plate in which the abutting rails are adapted to rest, said socket-plate having side flanges projecting upwardly, fish-plates engaging the sides of the rails and presenting enlarged heads at the upper edges thereof and 50 wedge-plates engaging said heads and said flanges, affording means for clamping said fish-plates to the rail.

2. A rail-joint comprising, in combination, 55 a socket-plate in which the abutting extremities of the rails rest, said socket-plate having flanges projecting upwardly beyond the side edges of the rail-flanges, the flanges of said socket-plate having longitudinally-disposed 60 grooves formed in the inner faces thereof, fish-plates disposed on opposite sides of the rails and presenting heads at the upper extremities thereof with shoulders and wedge-plates having tongues received in said grooves and engaging the said shoulders at their up- 65 per edges.

3. A rail-joint comprising, in combination, a socket-plate presenting side flanges projecting upwardly at the sides of the rail, fish-plates engaging the sides of the rail and presenting outwardly-projecting shoulders and longitudinally-inclined faces below said shoulders and wedge-plates engaging said flanges and said shoulders and having faces engaging said inclined faces. 75

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN W. ENRIGHT.
 EDWARD J. ENRIGHT.

Witnesses:
 GEO. W. ARNAS,
 JOS. MAILLE.