T. ANSLEY.

RAIL JOINT.

APPLICATION FILED SEPT. 26, 1913.

1,109,951.

Patented Sept. 8, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

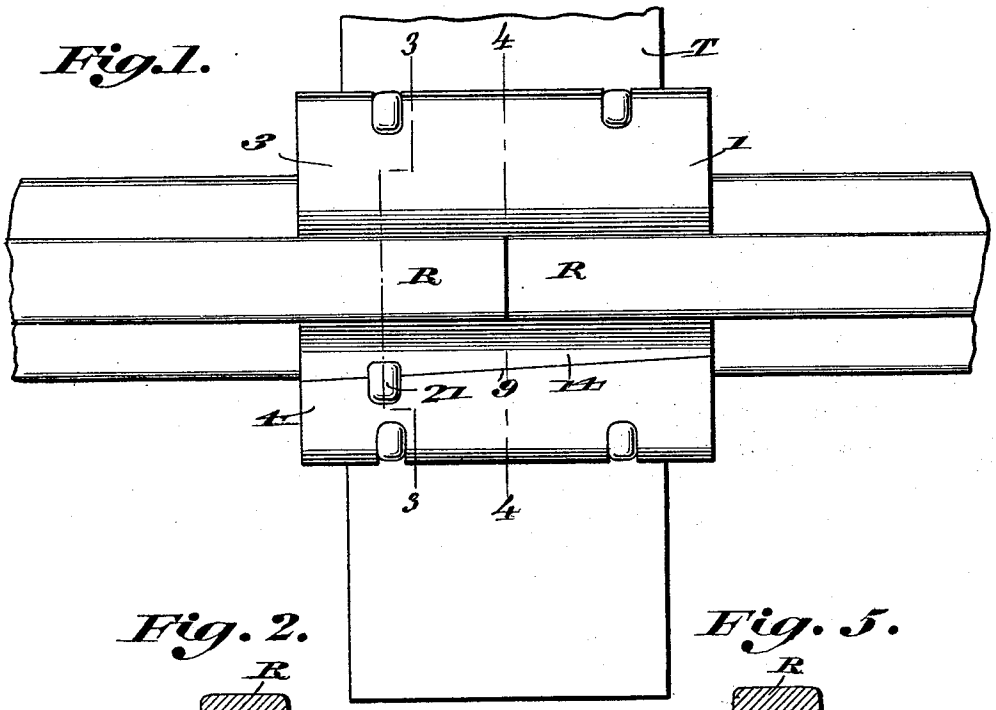


Fig. 2.

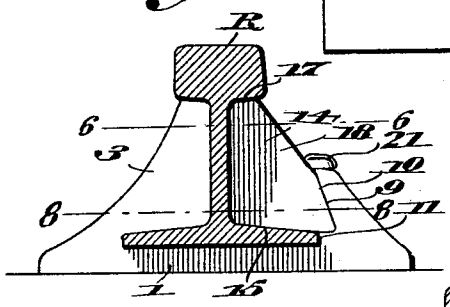


Fig. 5.

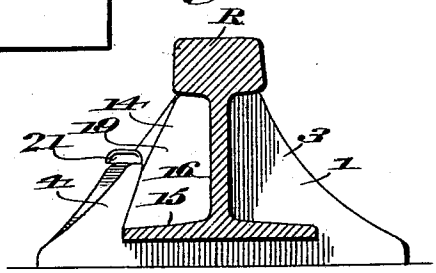
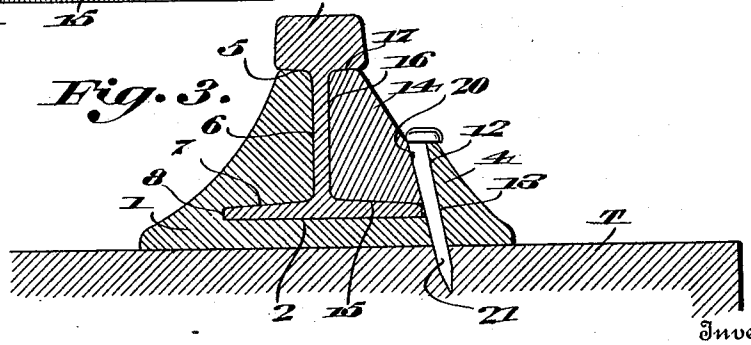


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

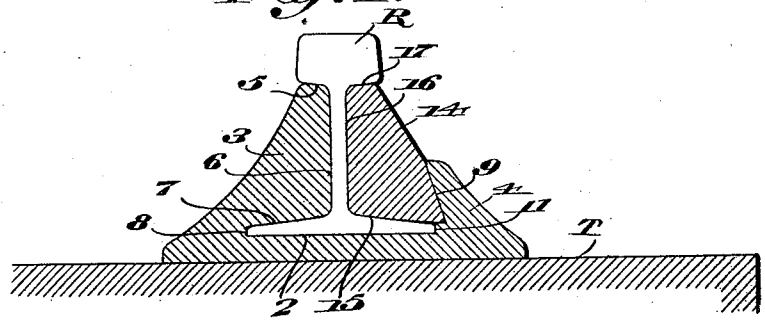


Fig. 6.

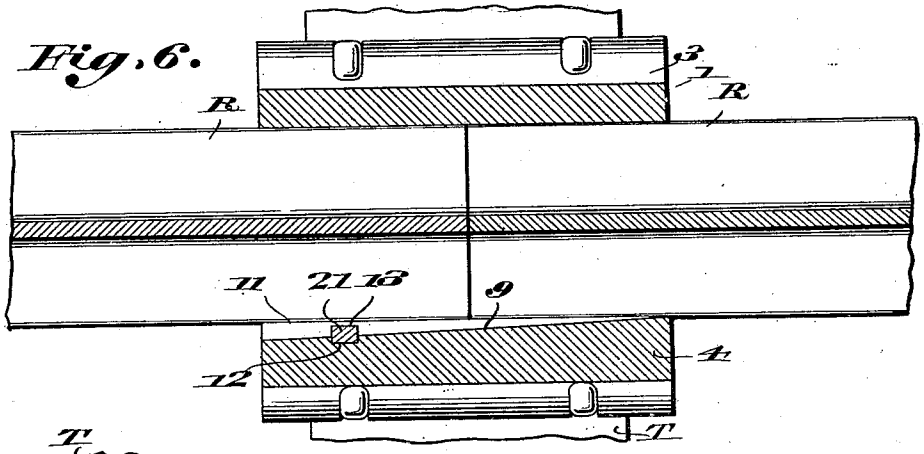


Fig. 8.

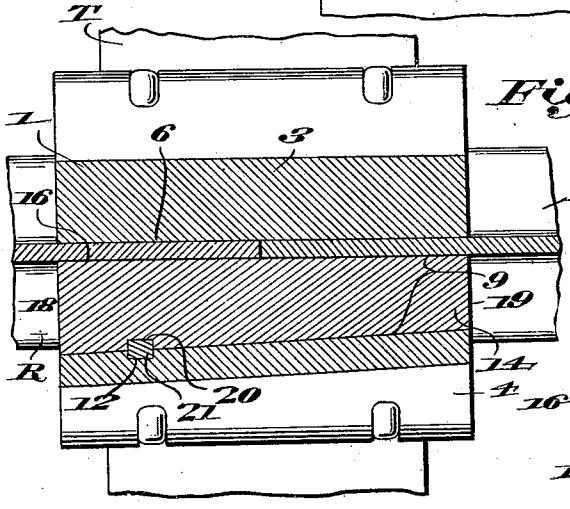
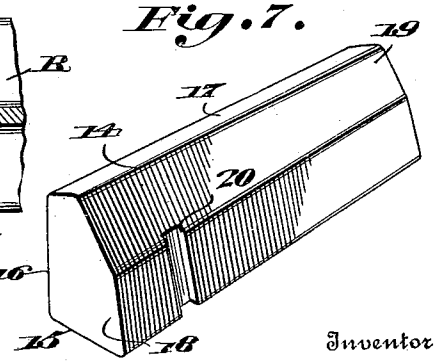


Fig. 7.



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RAIL-JOINT.

1,109,951. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed September 26, 1913. Serial No. 792,006.

To all whom it may concern:

Be it known that I, THOMAS ANSLEY, a citizen of the United States, residing at Lowry City, in the county of St. Clair and State of Missouri, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention relates to improvements in rail joints, the object of the invention being to provide a joint chair which will receive the rail ends and which includes a wedge or key member which affords a binding action against their webs and between the undersurfaces of their heads and the flanges of the rails to connect the meeting ends without the employment of the usual fish plates or without the employment of bolts, spikes or other securing elements which necessitate openings in the rail, and consequently weaken the rails at such points.

With the above and other objects in view, the improvement resides in the construction, combination and arrangement of parts set forth in the following specification and falling within the scope of the appended claim.

In the drawings: Figure 1 is a top plan view of a joint constructed in accordance with the present invention, showing the same engaging two rail ends, Fig. 2 is an end elevation of the chair, the rail being shown in section, Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1, Fig. 4 is a sectional view on the line 4—4 of Fig. 1, Fig. 5 is an elevation looking toward the opposite end of the joint chair from that illustrated in Fig. 2, Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 2, Fig. 7 is a perspective view of a wedge block, and Fig. 8 is a horizontal sectional view on the line 8—8 of Fig. 2.

Referring now to the drawings in detail, 1 designates the joint chair which comprises a horizontally straight base 2 upon which the base flanges of the rails R—R rest. The base is of a considerably greater width than that of the base flanges of the rails, and the said base 2 is sloped upwardly from its longitudinal ends to provide integrally formed enlargements 3 and 4. The enlargement 3 has its outer face curved upwardly and terminates in an angular wall or end 5 which is shaped to conform to the underface of the heads of the rails with which it is adapted to contact and to support. The inner face of the enlargement provides a vertically straight longitudinally extending wall 6 which is adapted to engage with the webs of the rail and the said wall terminates in an undercut angular portion 7 which provides what may be termed an overlying flange for the portion of the base upon which the rails are received. This undercut portion terminates in a vertically straight longitudinally extending wall or shoulder 8 which is adapted to be contacted by the longitudinal edges of the flanges of the rails when the said rails are arranged upon the joint chair.

The second enlarged portion of the chair terminates in a wall 9 which is inclined downwardly and inwardly from its upper edge as well as beveled from one end to the other end, the end of the joint chair having the widest opening, which is designated by the numeral 10. The downwardly inclined longitudinally sloping wall 9 terminates in a horizontally straight wall or shoulder 11 which projects a distance above the rail engaging portion of the base, equaling the thickness of the rails at the longitudinal edges thereof. The horizontal portion of this shoulder 11 is wider at the end 10 of the chair than at the opposite end thereof, the vertical portion of the shoulder being straight throughout to receive the said edges of the base flanges of the rails. The wall 9, adjacent the wider opening of the chair is provided with a depression 12 which communicates with a substantially rectangular opening 13 that is formed in the shoulder 11 as well as within the base 2 of the device. The longitudinal edges of the joint chair are provided with suitable notches which are adapted to receive spikes in the usual manner and thus secure the chair upon one or more ties T.

After the rails R are positioned within the rail engaging portions of the chair, I provide a wedge-block 14 which is of a length equaling the length of the chair. The wedge block has a lower angular base 15, the same being shaped to conform with the base flanges of the rails which it overlies, and the inner face of the said block is vertically straight, as indicated by the numeral 16, while the upper edge 17 is slightly inclined or beveled to its outer face to conform to the shape of the heads of the rails with which it is adapted to contact. This upper edge 17 is slightly beveled longitudi-

nally of the block, or the distance between the edge 17 and the base 15 at the end 18 of the block is slightly greater than the thickness at the end 19 of the said block, although the gradual thickening of the block does not serve to raise one of the rails out of alinement or register with the other rails, but produces a binding effect between the heads and base flanges of the rails so as to force the said base flanges tightly upon the rail engaging portion of the base 2 as well as into tight engagement with the edge or wall 5 provided upon the wall or edge 6. Likewise, the wall 6 may be slightly inclined in a longitudinal direction. The outer face of the wedge block is beveled from its lower edge upwardly, as indicated by the numeral 19, and the said side 19 is inclined from the end 18 to the opposite end of the block, the said inclined portion being sufficient to force the rails laterally toward the rail engaging portions provided upon the opposite side of the joint chair, and the said wedge block has its beveled or inclined portion, at a suitable distance away from its end 18 formed with a depression 20 which, when the block is properly arranged upon the joint chair and the rails will register with the depression 12, and passing through the registering depressions as well as through the opening 13 is a spike 21 which secures the block upon the joint chair against longitudinal movement, and which also adds to the wedging function of the block at one end of the chair, the said spikes entering one of the rail ties.

From the above description, taken in connection with the accompanying drawings, the simplicity of the device as well as the advantages thereof will, it is thought, be perfectly apparent to those skilled in the art to which such inventions appertain without further detailed description.

Having thus described the invention, what I claim is:

In a rail joint, a joint chair comprising a base having a centrally arranged seat upon which two rails are adapted to rest, the base provided with upwardly extending side flanges, one of said flanges terminating in an inclined edge which is adapted to underlie the heads of the rails and which is formed with an inclined inner face which overlies the rail receiving portion of the base and which contacts with the base flanges of the rail, the opposite side of the chair having its inner face sloping downwardly and being beveled from one end of the chair to its opposite end, the said face terminating in a longitudinally extending shoulder, the inner wall of which being longitudinally straight and adapted to be contacted by the longitudinal edges of the base flanges of the rails, the said beveled wall being formed with a depression which enters an opening provided in the shoulder and which passes through the base of the chair, a wedge block, said block being shaped to engage within the fishing spaces of the rails and having its upper edge gradually and slightly inclined from one of its ends to its opposite end, the outer face of the block being shaped to agree with the downwardly beveled and longitudinally inclined wall of the chair, and being further provided with a depression which is adapted to register with the depression in the said wall, and a locking key passing through the registering depression in the shoulder and base of the joint chair.

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

THOMAS ANSLEY.

Witnesses:
W. H. DAWSON,
E. D. WALKER.