

W. T. SAPP.
RAIL JOINT.
APPLICATION FILED JULY 5, 1912.

1,060,501.

Patented Apr. 29, 1913.

Fig. 1.

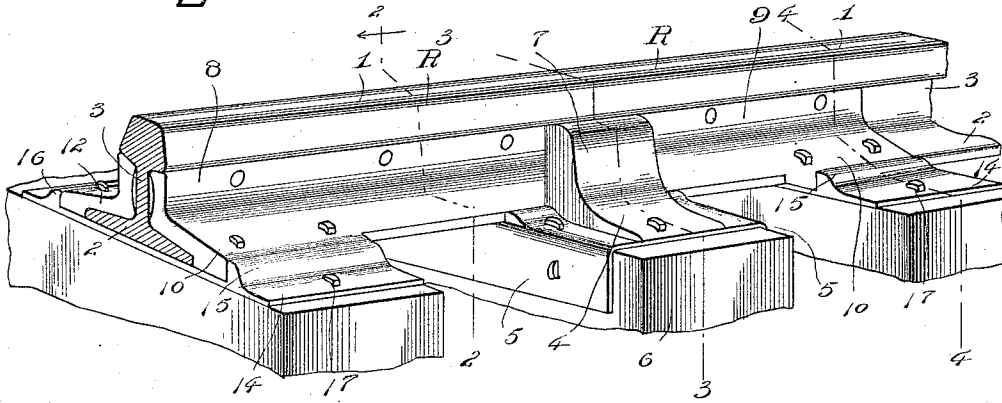


Fig. 2.

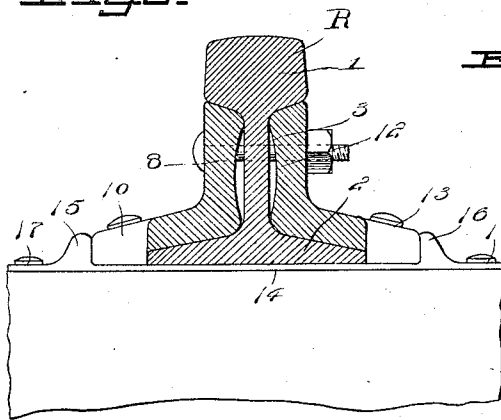


Fig. 3.

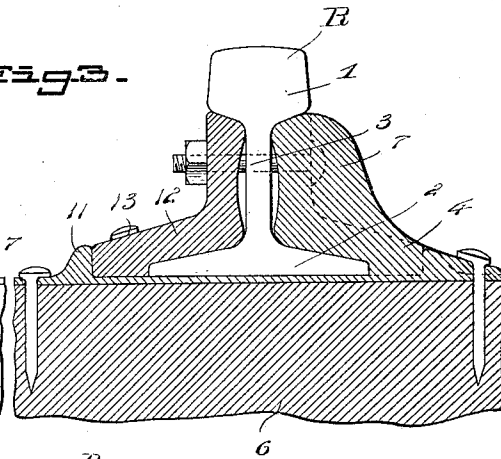
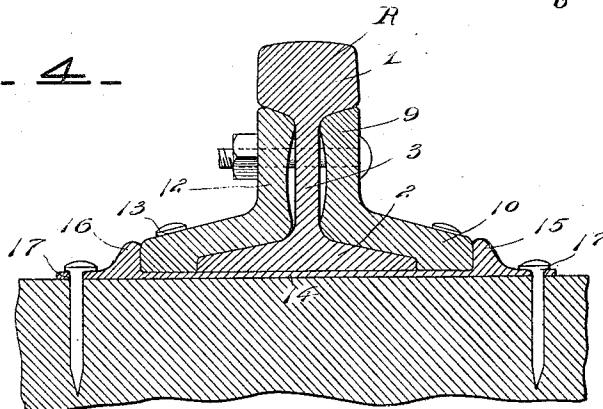


Fig. 4.



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RAIL-JOINT.

1,060,501.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM T. SAPP, a citizen of the United States, residing at Hinson, in the county of Gadsden and State of Florida, 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.

In carrying out the invention it is my purpose to provide a simple and effective means for connecting the meeting ends of railway rails which will prevent the sagging of the rails at their joint as well as the spreading of the rails. I therefore contemplate the employment of a combined rail chair and fish plate, the said chair being centrally arranged with relation to the plate and being provided with a solid enlargement which is adapted to engage the rails at their point of meeting, the said chair being further provided with downturned flanges which are adapted to be secured to the opposite sides of a tie, the fish plate proper extending beyond the chair and comprising a flanged member which engages with the base flange and with the under face of the head of the rail upon one of the sides of the rails, the said fish plates adapted to rest upon ties arranged adjacent the tie to which the chair is secured. Rail plates are provided to receive the said ends of the fish plates and are also adapted to underlie the rails, the said plates being provided adjacent their opposite ends with enlargements which contact with the flanged fish plate of the chair and with an independent flanged fish plate which is arranged upon the opposite sides of the rails.

With the above recited objects in view, and others which will be apparent as the nature of the invention is more fully understood, the improvement resides in the construction, combination and arrangement of parts set forth in the following description, and falling within the scope of the appended claims.

In the drawing, Figure 1 is a perspective view of my improvement showing the same in applied position upon the meeting ends of a pair of rails. Fig. 2 is a transverse sectional view taken approximately upon the line 2—2 of Fig. 1. Fig. 3 is a similar sectional view taken approximately upon the line 3—3 of Fig. 1. Fig. 4 is a trans-

verse sectional view taken upon the line 4—4 of Fig. 1.

Referring now to the drawing in detail R—R designate the meeting ends of a pair of rails. These rails are of the ordinary construction, each comprising a head 1, a base flange 2, and a connecting web 3.

My improved connecting member comprises what I term a chair 4, the same being provided with side flanges 5 having openings which are adapted for the reception of securing elements whereby the said flanges are attached to the sides of a central tie 6. The chair 4 extends beneath the rails R—R and has its outer face centrally provided with a vertically extending enlargement 7, and secured to the chair and to the enlargement thereof are flanged fish plates 8 and 9, the same extending in opposite directions from the said chair 4. The extremities of the fish plates are provided with extending portions 10, the latter also projecting below the terminals of the angular fish plates 8 to provide the vertically straight longitudinally extending walls which are adapted to abut with the edges of the base flanges 2 of the rails R—R upon the outer faces of the said rails. The angular plates 8 and 9 engage the upper faces of the base flanges of the rails, and the upper longitudinally extending portions of the said plates as well as the enlargements provided by the chair are adapted to snugly engage beneath the heads 1 of the rails R—R. The vertical portions of the plates 8 and 9 are provided with transverse openings, the same being adapted to receive the usual securing nuts and bolts, while the extending portions of the ends of the plates 8 and 9, as well as the horizontal portions of the chair are all formed with suitable spike receiving openings. The portion of the upper face of the chair 4, which extends beneath the rails is provided with a longitudinally extending shoulder 11, the said shoulder adapted to provide an abutment for the flanged edge of a fish plate 12 which is arranged upon the opposite faces of the rails R—R. The fish plate is provided with suitable spike openings 13 arranged upon its longitudinal edge and disposed directly over similar openings formed in the rail chair 4.

The numerals 14 designate the rail plates which are provided with oppositely arranged shoulders 15 and 16, the shoulder 15

being adapted to contact with the longitudinal edge of the extensions 10 of the plates 8 and 9, while the shoulder 16 is adapted to contact with the edges provided
 5 by the flanged portions of the fish plate 12. These rail plates, of course, under-
 10 lie the rails as well as the fish plates, and the said plates beyond their shoulders 15 and 16 are formed with suitable spike openings 17 as
 15 well as with openings which register with the spike opening in the extensions 10 of the plates 8 and 9, and with the openings or depressions provided in the longitudinal
 20 edges of the fish plate 12. It is, of course, to be understood that the vertical mem-
 25 bers of the fish plates 12 are provided with openings which register with the openings in the plates 8 and 9 and with the open-
 30 ings in the webs 3 of the rails, all of the said registering openings being adapted for
 35 the reception of the securing bolts.

From the above description, taken in connection with the accompanying drawing, the simplicity of the device, as well as the ad-
 25 vantages thereof, will, it is thought, commend themselves to those skilled in the art to which such inventions appertain without
 30 further detailed description.

Having thus described the invention, what
 30 I claim is:—

1. The combination with the meeting ends of a pair of railway rails, of a joint for said rails, said joint embodying a rail chair having a centrally enlarged portion, said chair
 35 having flanges which are adapted to straddle a tie and to be secured thereto, angle plates projecting beyond the opposite sides of the chair, and resting upon ties disposed at the
 40 opposite sides of the tie receiving the rail chair, means for securing the rail chair to the central tie, means for securing the angle bars to the remaining ties, a fish plate upon
 45 the opposite faces of the rails, and means for securing the chair to the fish plates.

2. The combination with the meeting ends of a pair of rails, of a chair for said rails, said chair having a solid vertically extend-
 50 ing enlargement which is adapted to abut against the rail ends, the said chair having its opposite ends provided with depending flanges, means for securing the flanges to
 55 a tie, means for securing the face of the

chair to the tie, the said chair being provided with angular extensions, the said
 55 angular extensions having their ends pro- vided with projecting portions which are adapted to have their inner edges extend-
 60 ing downwardly and embracing the base flanges of the rails, ties arranged beneath the said ends of the angular extensions of
 65 the chair, means for securing the said ex- tensions to the ties, an angular fish plate upon the opposite faces of the rails, and
 70 means for securing the fish plate to the angular extensions of the chair and to the ties.

3. The combination with the meeting ends of a pair of rails, of a rail chair having a central vertically extending enlargement which is adapted to abut the meeting ends
 70 of the rails, and to under-lie the heads of the rails, the said chair having its longitudinal edges provided with down-turned flanges, the said flanges and chair adapted to em-
 75 brace a rail tie, means for securing both the flanges and the chair to the tie, the said chair being also provided with a shoulder which
 80 is arranged upon the chair opposite its enlargement and to the opposite portion of the rails engaged by the enlargement, the chair
 85 being provided with angular extensions terminating in down-turned portions which are adapted to engage the edges of the base flanges of the rails and to overlie additional
 90 ties, shouldered rail plates under-lying the rails, and engaging with the said extensions, means for securing the extensions to the
 95 plates and to the ties, means for securing the plates to the ties, an angle fish plate having its edges provided with spike depres-
 sions and adapted to contact with the shoulders provided by the chair and by the rail plates, the said spike depressions adapted to register with openings provided in the
 rail chair and in the rail plates, spikes for these openings, and means for connecting the fish plate with the webs of the rails.

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

WILLIAM T. SAPP.

Witnesses:

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