

Aug. 31, 1926.

A. G. FROST

1,598,075

RAIL JOINT

Filed May 11, 1923

2 Sheets-Sheet 1

Fig. 1.

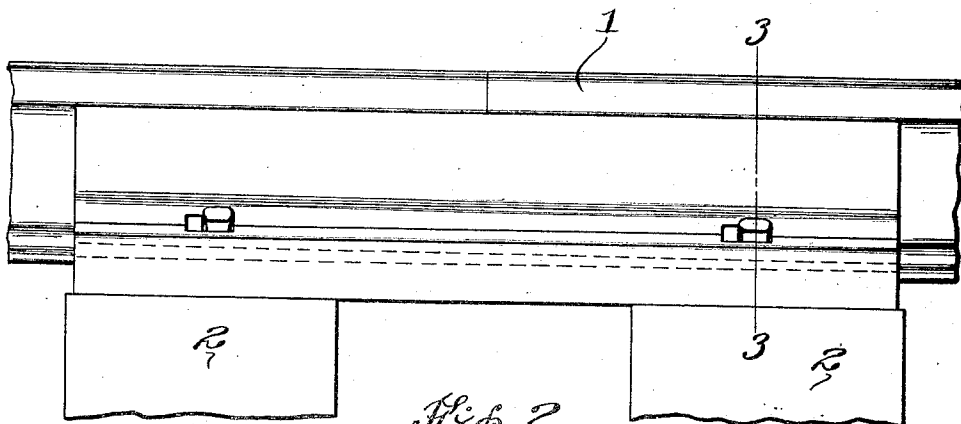


Fig. 2.

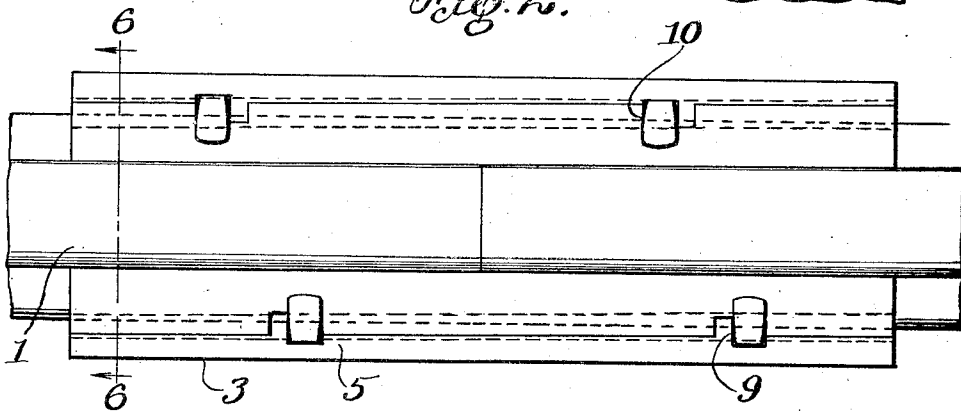
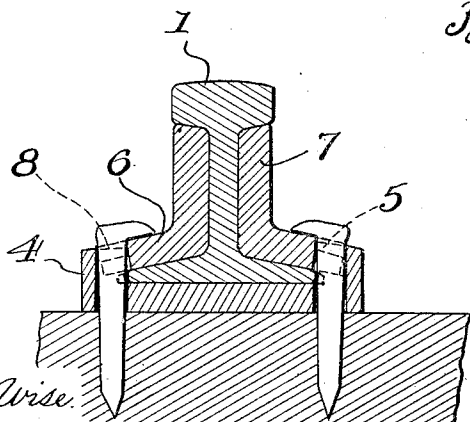


Fig. 3.



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Fig. 4

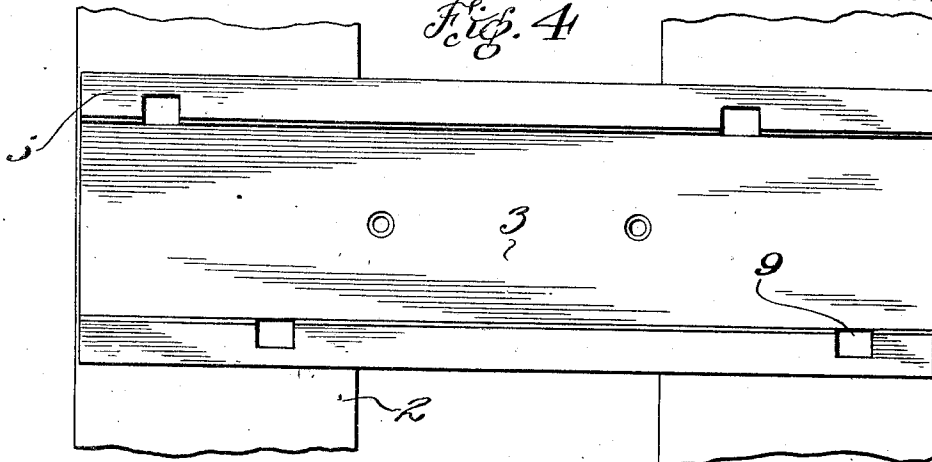


Fig. 6.

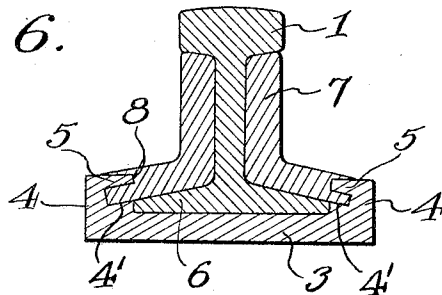
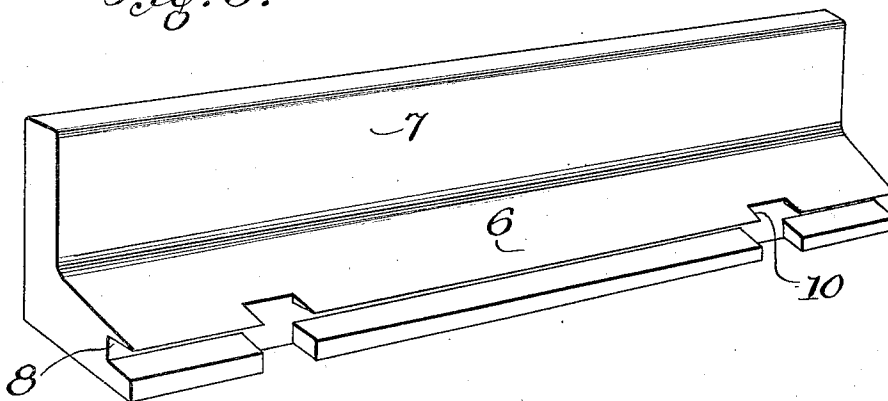


Fig. 5.



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UNITED STATES PATENT OFFICE.

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RAIL JOINT.

Application filed May 11, 1923. Serial No. 638,413.

An object of this invention is to produce a simple and effective means for connecting the meeting ends of railway rails.

A further object is to produce a rail joint that includes a base arranged upon ties and upon which the rail ends rest, and to provide side plates which have a wedging engagement with the base and with the rails, the means which secure the side members on the base and which enter the ties, also engaging the side members in a manner to more effectively wedge the same into both rail and base engagement.

A still further object is to produce a rail joint in which the elements constituting the same are so constructed that water will be shed therefrom to overcome the liability of rust between the parts and the adhesion of said parts incident thereto.

To the attainment of the foregoing and other objects which will present themselves as the nature of the invention is better understood, reference is to be had to the drawings which accompany and which form part of this application.

In the drawings:—

Figure 1 is a side elevation of two rails connected in accordance with this invention.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view on the line 3—3 of Figure 1.

Figure 4 is a view of the base member of the joint.

Figure 5 is a perspective view of one of the side members of the joint.

Figure 6 is a sectional view on the line 6—6 of Figure 2.

Rails 1 of the ordinary construction rest upon and are spiked to the usual ties 2. Resting on certain of the ties 2, and receiving thereover the confronting ends of the rails 1 is the base plate 3 of my improved rail joint. The base 3 may have its body provided with openings that form water or moisture outlets. The base has its edges formed with upstanding flanges 4. The flanges, on their inner faces and at a suitable distance above the base 3 are grooved longitudinally their entire length, providing outward of the grooves tongues 5. The tongues 5 gradually decrease in thickness from their juncture with the flanges 4 to their outer ends so that both the upper and outer faces of the said tongues are inclined. The lower walls provided by the grooves 4' are similarly inclined. The base plate 3

is wedge-shaped horizontally between the flanges 4 and of substantially uniform thickness.

The angle side members of the joint are similarly constructed, each including an angle base flange 6 which terminates in a straight upstanding flange or plate 7. The angle flanges 6 are wedge-shaped horizontally and of substantially uniform thickness. The outer edges of the base flanges 6 are formed with longitudinally disposed substantially wedge-shaped grooves 8 for the reception of the wedge-shaped tongues 5 on the flanges 4 of the base 3, and also for the reception of the portions of the flanges 6 below the channels in the grooves 4' of the flanges 4 of the base 3. The inner edges of the flanges 4 of the base 3 have rectangular openings 9 therethrough which, of course, pass through the base. The flanges 6 of the angle or fish plates have elongated openings 10 therethrough. Spikes are designed to pass through the openings 9 and 10 and to enter the ties. The spikes are also designed to contact with one of the end walls provided by the openings 10 in the side members of the joint and by virtue of such contact to force the said side members into wedging engagement with the tongues and flanges of the base and likewise into wedging engagement with the base flanges and webs of the rails. These spikes are the only means employed for securing the rails on the joint members.

It is thought that the foregoing description, when taken in connection with the drawings will fully set forth the construction and advantages of the improvement to those skilled in the art to which this invention relates without further detailed description.

Having described the invention, I claim:—

The combination with abutting rail ends and ties on which the rails rest, of a connecting means for said rail ends, comprising a base plate resting on the tie and receiving the rail ends therein, said base plate having its edges formed with upstanding flanges whose inner faces are grooved longitudinally throughout the length thereof to provide substantially V-shaped tongues above the grooves, and the said tongues being gradually increased in width from one end to the other of the plate, both the upper and lower walls provided by the groove being arranged at the same inclination and

the said lower walls of the grooves being in a line with the beveled upper faces of the base flanges of the rails, angle fish plates having their base portions wedge-shaped horizontally and the outer edges thereof 5 formed with longitudinal wedge-shaped channels to receive therein the tongues on the flanges of the base plate, and to have their lower portions received in the groove 10 in the flanges of the base and to be forced, by virtue of such engagement, into frictional contact with the base flanges of the rails, and means passing through the interengaging portions of the fish plates and base and entering the tie for drawing the fish plates 15 into wedging engagement with the base plate, and for locking the said fish plates on the base plate and ties.

In testimony whereof I affix my signature.

ALLEN G. FROST.