C. SCHLAGEL.

RAIL JOINT.

APPLICATION FILED FEB. 6, 1912.

1,067,145. Patented July 8, 1913.

Fig. 1.

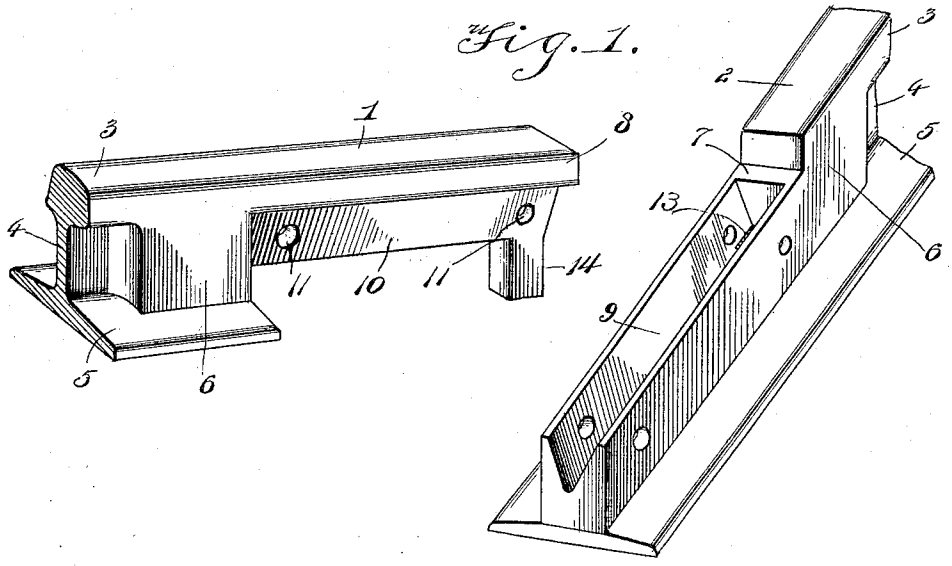


Fig. 2.

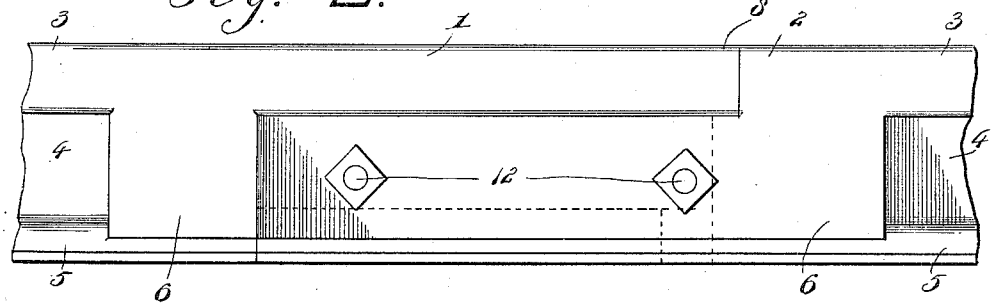
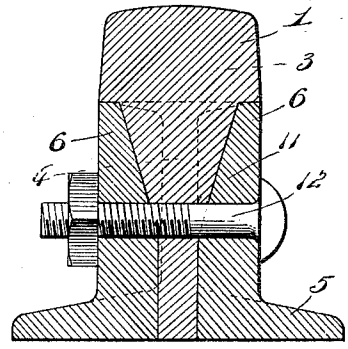


Fig. 3.



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Witnesses

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UNITED STATES PATENT OFFICE.

CONRAD SCHLAGEL, OF OTIS, KANSAS.

RAIL-JOINT.

1,067,145. Specification of Letters Patent. Patented July 8, 1913.

Application filed February 6, 1912. Serial No. 675,703.

To all whom it may concern:

Be it known that I, CONRAD SCHLAGEL, a citizen of the United States, residing at Otis, in the county of Rush and State of Kansas, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints.

The object of the invention consists in providing a simple and efficient connection between the meeting ends of adjoining ends whereby fish plates are dispensed with and lateral displacements absolutely prevented.

Further objects of this invention will appear as the following specific description is read in connection with the accompanying drawing, which forms a part of this application, and in which:—

Figure 1 is a perspective view of the ends of two rails separated from each other and one arranged at an angle to the other. Fig. 2 is a side elevation showing the rails joined together. Fig. 3 is a section taken through the joint.

Referring more particularly to the drawings, 1 and 2 represent the separate rails to be connected, both of which are constructed in the usual manner, *i. e.*, having a head 3, web 4, and base flange 5. The ends of both rails have their webs 4 thickened, as shown at 6 and the end of the rail 2 has its head 3 cut away to produce a shoulder 7 upon which the projecting end 8 of the rail 1 rests. The web of the rail 2 is provided with a longitudinal V-shaped socket 9 which is engaged by the V-shaped web 10 formed upon the rail 1, the thickened portion 6 and the base flange 5 thereof being cut away to produce the wedge-shaped formation 10. The wedge-shaped web seats firmly in the socket 9 and is provided with transverse apertures 11 adapted to register with similar apertures in the thickened web of the rail 2 and to receive bolts 12 which pass therethrough to join the rail ends together. The bolts effectually prevent any longitudinal separation of the rail ends while the arrangement of the V-shaped web and socket prevents any lateral displacement of the rail ends, and at the same time, tends to more firmly lock the rail ends together when weight is applied thereto.

By reference to Fig. 3 of the drawing, it will be noted that the longitudinal walls provided by the V-shaped socket 9 have their upper edges shaped to agree with the shape of the under face of the head of the rail 1 beyond its juncture with its V-shaped web 10, and that the said head rests directly upon the said upper edges. This places all of the weight of the rail 1 as well as the weight of the rolling stock passing over the joint upon the side walls provided by the socket 9, and the bolts 12 passing through the registering openings in the joint will, when their nuts are screwed home thereon, have a tendency to force the said side walls into frictional engagement with the sides of the V-shaped web. It will be also noted, by reference to Figs. 1 and 2 of the drawings, that the underface of the head 3 of the rail 1 projecting beyond the V-shaped web is flat and rests directly upon the flat shoulder 7 provided upon the rail 2. The lug 14 is arranged at the end of the V-shaped web 10 and the opening or aperture 13 within which it is received is disposed to the rear of the socket 9 and has one of its walls arranged in a plane with the inner vertical wall provided by the said socket. The lug 14 is of a size to permit of a limited longitudinal movement of the rail ends, but is also of a size sufficient to prevent the projecting head 8 leaving the shoulder 7, so that when the rolling stock passes from the end of the head of the rail 2 upon the head of the rail 1, the securing elements 12 are entirely relieved from strain, and as a consequence, the nuts will not work loose from the bolts.

In order to prevent longitudinal displacement of the rail ends and to take the strain off the bolts, the web of the rail 2 has an aperture 13 formed therein which is adapted to receive a lug 14 depending from the web 10 of the rail end 1.

What is claimed is:—

In a rail joint, two rails, one of said rails having a web enlargement at its end which is formed with a longitudinally extending substantially V-shaped socket which terminates a distance away from the terminal head of the rail to provide a shoulder between the socket and the rail head, the socket being open to the end of the rail enlargement and the lower wall of the socket at its inner end being formed with an aperture which passes entirely through the rail, the side walls provided by the socket having bolt receiving openings, the second rail having a web enlargement which is arranged adjacent its end and is provided with an extending head which is adapted to rest upon the up-

per edges of the side walls provided by the socket of the first mentioned rail and to also rest upon the shoulder of the said first mentioned rail end, the second mentioned rail being provided with a web extension which is substantially V-shaped in cross section and which is adapted to be received within the socket of the first mentioned rail, the V-shaped web extension having its end provided with a downturned lug which is adapted to be received within the aperture of the first mentioned rail when the rails are assembled to form the joint, the V-shaped web having openings which register with the openings provided in the side walls of the socket, bolts passing through the openings, and securing nuts for the bolts, all substantially as and for the purpose set forth.

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

CONRAD SCHLAGEL.

Witnesses:
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H. C. SCHLEGEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."