

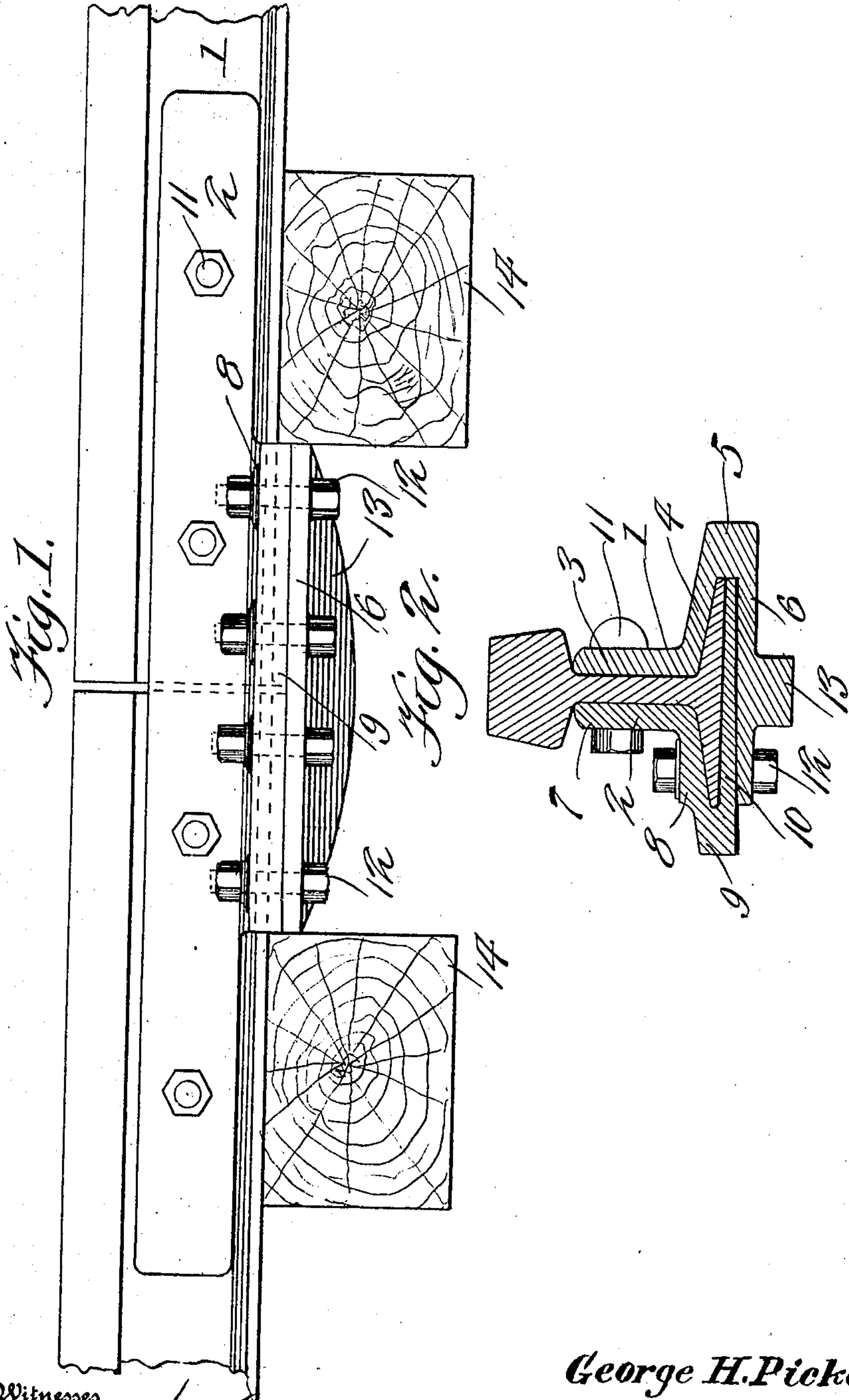
G. H. PICKERING.

RAIL JOINT.

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918,467.

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GEORGE H. PICKERING, OF PAWTUCKET, RHODE ISLAND.

RAIL-JOINT.

No. 918,467.

Specification of Letters Patent.

Patented April 13, 1909.

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To all whom it may concern:

Be it known that I, GEORGE H. PICKERING, a British subject, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The invention relates to an improvement in rail joints, and is directed particularly to a chair construction in which the rail ends are housed and held against independent movement.

The main object of the invention is the production of a rail joint in which the rail ends are properly supported to insure uniform alinement of the tread portion of the rails under all conditions and to prevent lateral displacement of either rail, the construction of the joint including a reinforcing member to materially strengthen that part of the construction which is subjected to greatest strain during travel of the train over the rail ends.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in side elevation illustrating the construction and application of my improved rail joint. Fig. 2 is a transverse section of the same.

Referring particularly to the drawings, my improved rail joint is made up of two members, an outer member 1, and an inner member 2. The outer member, which is made up of a single piece of material, comprises a web plate 3 designed to bear against the outer surfaces of the webs of the meeting rail ends. From the web plate 3 the member 1 is projected laterally to provide a flange plate 4 designed to overlie and bear upon the upper surfaces of the outer extensions of the base flanges of the rails. From the flange plate the member 1 depends in the form of a wall 5 to bear against the edge of the base flange, and from the lower end of the wall 5 there is projected a base plate 6 designed to correspond in width with the base flange of the rail and to underlie the same in the use of the rail joint. The inner member 2 has a web wall 7 to bear against the inner sides of the rail webs in opposition to the web plate 3 of the member 1, said member 2 also having a flange plate 8 corresponding to the plate 4 of the member 1, a depending wall 9 corresponding to the wall 5 of the member 1 and a

base plate 10 corresponding to the base plate 6 of the member 1, that is being of the full width of the base flanges.

The respective web plates 3 and 7 of the members 1 and 2 are of materially greater length than the flange plates or base plates of said members, said flange plates and base plates, however, being arranged centrally between the ends of the respective web plates, as clearly shown in Fig. 1. The respective base plates 6 and 10 of the member are wedge-shaped in transverse section in respectively reverse directions, and the ends of the base flanges of the rails adapted to be received between the flange plates and base plates are also wedge-shaped, so that when the members are arranged in coöperative relation with the base plates they will be wedged in place to assist in securing the parts against accidental displacement.

In assembling the rail joint the inner member is first applied to cause the base plate 10 to underlie the base flanges of the respective rails so as to extend about equally in opposite directions beyond the juncture of the rail ends. The member 1 is then applied with the base plate 6 thereof underlying and directly contacting with the base plate 10 of the inner member, said members being forced together until their respective base plates aline at their edges. In this position the webs and base flanges of the rails are secured in an effective manner, the flanges being completely housed to prevent movement thereof in any direction independent of the rail joint.

Bolts 11 are passed through the transversely alined web plates 3 and 7 of the members and through the webs of the rails, similar bolts 12 being passed through the flange plate 8 of the inner member, the inner sections of the rail flanges underlying said plate and through both plates 6 and 10 of the members securing said members against lateral or endwise movement. As the strain upon the joint is in alinement with the web of the rail ends I prefer to reinforce the outer member 1 by forming on the under-surface of the base plate 6 of said member and in alinement with the web of the rails an extension 13, preferably curved in longitudinal plane and of greatest depth immediately beneath the juncture of the rail ends. This reinforcement serves to materially assist the rail joint of this invention in sustaining the strain to which it is subjected in the travel

of a train on the rails, as it tends to distribute the strain at which the juncture of the rails is subjected through the length of the base plates of the members. The improvement
5 is particularly designed for use with railroad rails in which the juncture of the rail ends occurs between adjacent ties 14, in which instance the base plates 6 and 10 are of a length to extend from one tie to the other
10 while the web plates 3 and 7, which, as previously described, are of greater length than the base plates of the members, will engage the rails in both directions beyond the terminals of the base plates, all as clearly shown
15 in Fig. 1.

Having thus described the invention what is claimed as new, is:—

. A rail joint including an inner and an outer member, each of said members includ-
20 ing a web plate to engage the webs of the

rail ends, a flange plate to engage the flanges thereof, and a base plate to underlie said flanges, the web plates of the members being of greater length than the base plates thereof, the base plate of the inner member fitting
25 between the base plate of the outer member and the rail flanges, said base plates and engaged portions of the rail flanges being wedge-shaped in transverse section, and securing bolts engaging the flange plate of the
30 inner member, the rail flanges and the base plates of both members, the base plate of the outer member having a depending reinforce extending longitudinally of said member.

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

GEORGE H. PICKERING.

Witnesses:

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