

No. 875,098.

PATENTED DEC. 31, 1907.

P. A. OLSON.
RAIL AND TIE COUPLING.
APPLICATION FILED APR. 25, 1907.

2 SHEETS—SHEET 1.

Fig. 2

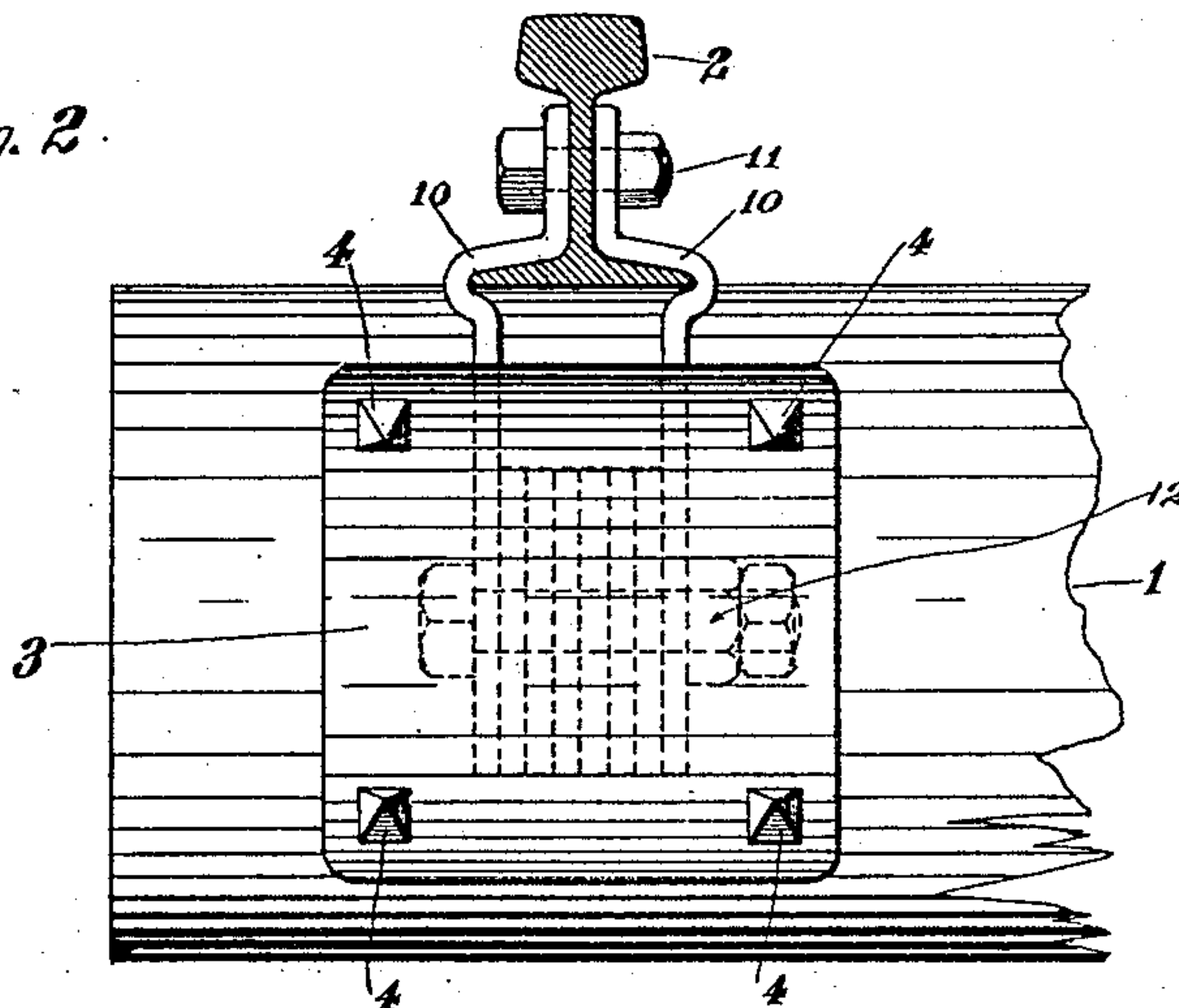
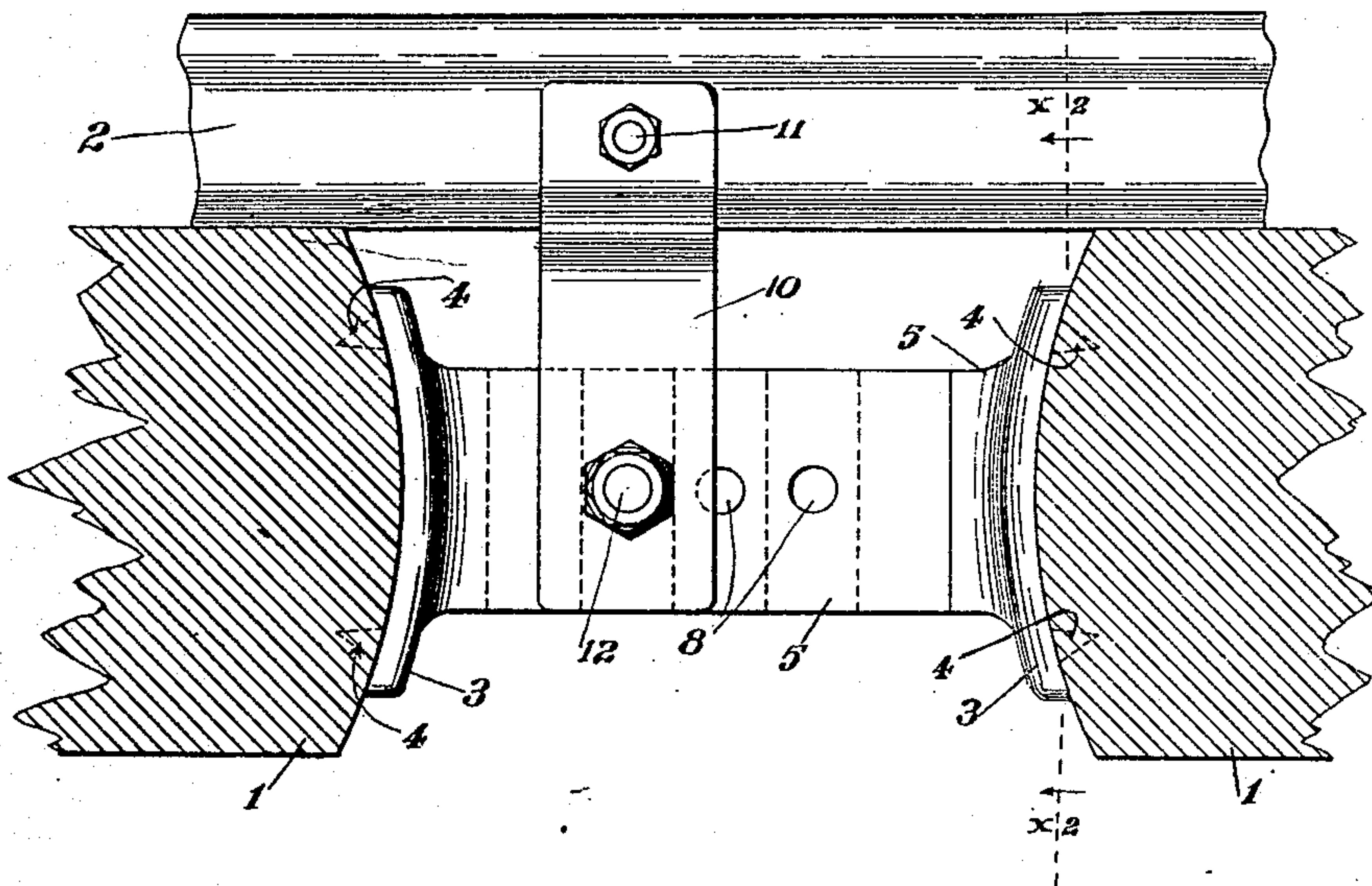


Fig. 1



Witnesses

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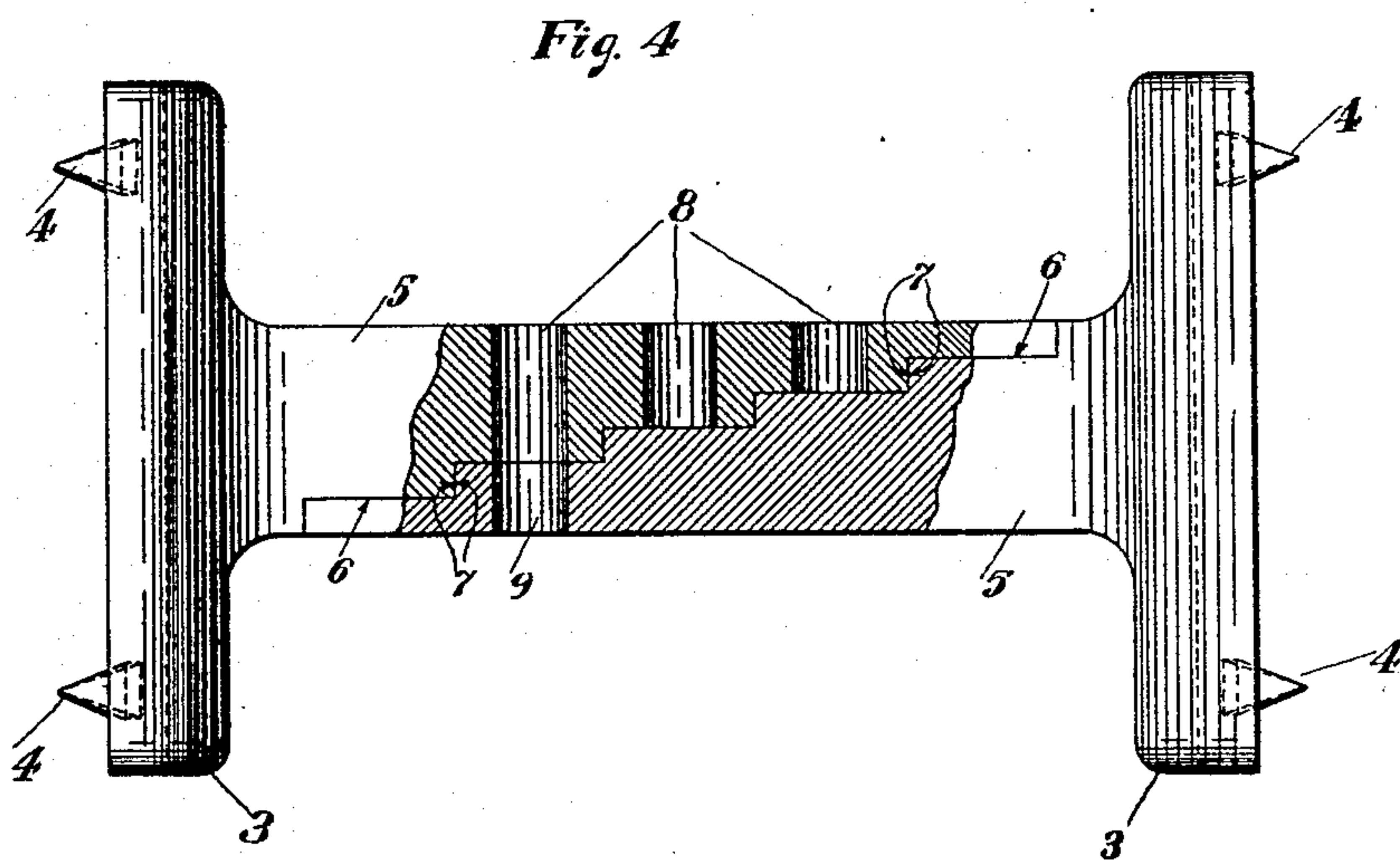
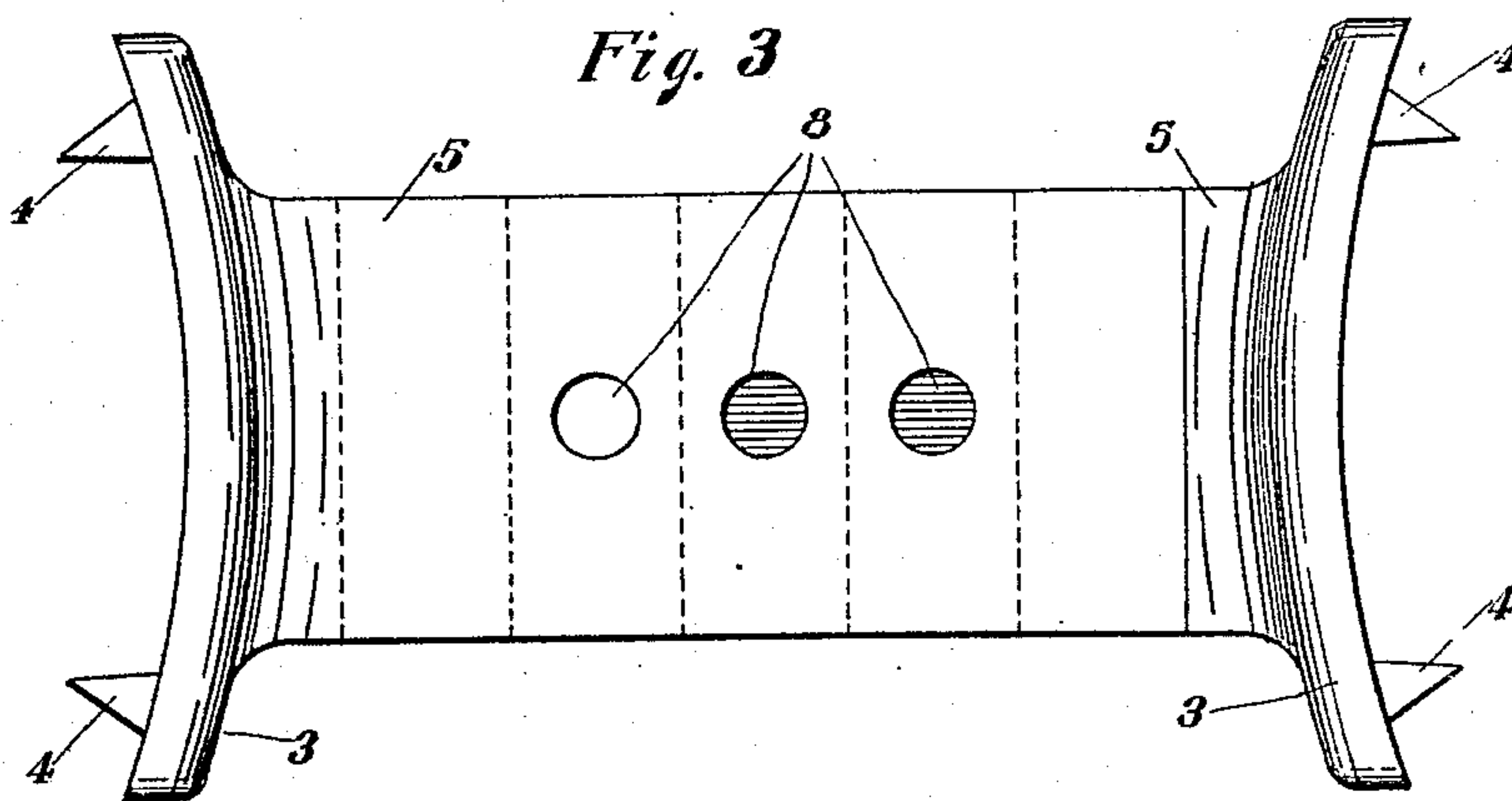
William M. Merchant

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

PETER A. OLSON, OF CLOQUET, MINNESOTA.

RAIL AND TIE COUPLING.

No. 875,098.

Specification of Letters Patent.

Patented Dec. 31, 1907.

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To all whom it may concern:

Be it known that I, PETER A. OLSON, a citizen of the United States, residing at Cloquet, in the county of Carlton and State of Minnesota, have invented certain new and useful Improvements in Rail and Tie Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its especial object to provide an improved rail and tie coupling adapted for use on railroads. As is well known, on double tracked roads, where all of the outgoing trains run on one track, and the incoming trains run on the other track, the constant forward movement and stopping of the trains in one direction cause the rails to creep. To prevent this creeping, a tie spacing device is placed between two ties and directly underneath each rail. Rail couplings are used in connection with more or less of these tie spacing devices. The rail coupling devices are adapted to be clamped to the lower portion of the rail and to the tie spacing device. These rail coupling devices prevent the rails from moving up and down upon the ties as the trains pass over the rails, thereby loosening the spikes, and in time often completely pulling the spikes from the ties, thereby causing the rails to spread, thus causing many wrecks, and to this end it consists of the novel devices and combinations of devices hereinafter described and pointed out in the claims.

The improved rail and tie coupling device is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation with some parts sectioned, showing the improved rail and tie coupling applied to the ties and the rail of a railroad. Fig. 2 is a view taken on the line $x^2 x^2$ of Fig. 1. Fig. 3 is a view in side elevation of the tie spacing device removed from the ties; and Fig. 4 is a plan view of the parts shown in Fig. 3, with some parts broken away and some parts sectioned.

The numeral 1 indicates the ties, and 2 one of the rails of a railroad track. Each tie spacing device consists of a pair of clamping heads 3 adapted to be pressed against the sides of two laterally spaced ties. To prevent

the clamping heads from moving up and down upon the ties 1, each clamping head 3 is provided, as shown, with four barbs 4 adapted to be pressed into the ties 1. Each clamping head 3 is further provided with a projecting arm 5, which arm 5, as shown at 6, is beveled approximately from its base to its outer end. The said beveled surface 6 is formed with a plurality of stop shoulders 7. The beveled surfaces of the two arms 5 are beveled in reverse directions, and their stop shoulders 7 also project in reverse directions, as best shown in Fig. 4. The arms 5 are adapted to overlap, and the bevel surface 6 and stop shoulders 7 of one of said arms 5 will engage with the bevel surface 6 and stop shoulders 7 of the other of said arms 5. The arms 5 are longitudinally adjustable with respect to each other, as best shown by dotted lines in Fig. 3.

To secure the arms 5 together in their different set adjustments, with reference to Fig. 4, the left hand arm 5 is provided with a series of perforations 8 of equal distance apart. These perforations 8 are adapted to register one at a time with a single perforation 9 formed in the right hand arm 5. If desired, the arm 5 may be provided with the same number of perforations. The numeral 10 indicates a pair of laterally spaced straps secured one to each side of the web of the rail 2, by a nutted bolt 11 passed through perforations in the web of said rail 2 and straps 10. Said straps 10 are first bent in a reverse direction to conform to the upper surface of the base of the rail 2, and then bent back for a short distance underneath said base. Finally they are bent into a vertical position. The lower ends of said straps 10 are perforated; and said perforations are adapted to register with the perforations 8 and 9 of the arms 5. To secure the arms 5 and the lower ends of the straps 10 together, a heavy nutted bolt 12 is passed through the perforations in the straps 10 and through the perforations 8 and 9 of the arms 5.

In practice, only one rail clamping device would be used to every four or five tie spacing devices.

What I claim is:—

1. In a rail and tie coupling, the combination with clamping heads adapted to engage laterally spaced ties, said heads having longitudinally adjustable arms adapted to overlap one with the other, of a rail coupling se-

cured to said rail, and means for securing said overlapping arms and said rail coupling together, substantially as described.

2. In a rail and tie coupling, the combination with a pair of clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely projecting arms, the free ends of which are cut on a bevel and adapted to overlap, of a rail coupling device secured to the base of the rail, and means for securing the said arms and rail coupling device together, substantially as described.

3. In a rail and tie coupling, the combination with a pair of barbed clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely projecting arms, the free ends of which are cut on a bevel and provided with a plurality of stop shoulders in staggered arrangement, the free ends of said arms overlapping, and the stop shoulders of the one adapted to engage the stop shoulders of the other, of a rail coupling device secured to the base of the rail, and means for securing the said arms and rail coupling device together, substantially as described.

4. In a rail and tie coupling, the combination with a pair of barbed clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely project-

ing and longitudinally adjustable arms, the free ends of which are cut on a bevel and provided with a plurality of reversely projecting stop shoulders in staggered arrangement, the free ends of said arms overlapping, and the stop shoulders of the one adapted to engage the stop shoulders of the other in their different set adjustments, perforations through said arms adapted to register one with the other, of a rail coupling comprising a pair of straps secured to each side of the web of the rail by a nutted bolt and bent to conform to the base of said rail, and a second nutted bolt passed through perforations in the depending ends of said stops and through the perforations of said arms to secure said rail coupling and said arms together, substantially as described.

5. In a tie spacing device, the combination with clamping heads adapted to engage laterally spaced ties, of longitudinally adjustable arms projecting from said heads, said arms adapted to overlap, and means for securing said arms together in their different set adjustments, substantially as described.

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

PETER A. OLSON.

Witnesses:

W. H. S. KAMP,
L. A. HANSON.