

J. J. O'DONNELL.
RAILWAY TIE AND RAIL FASTENING MEANS.
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948,242.

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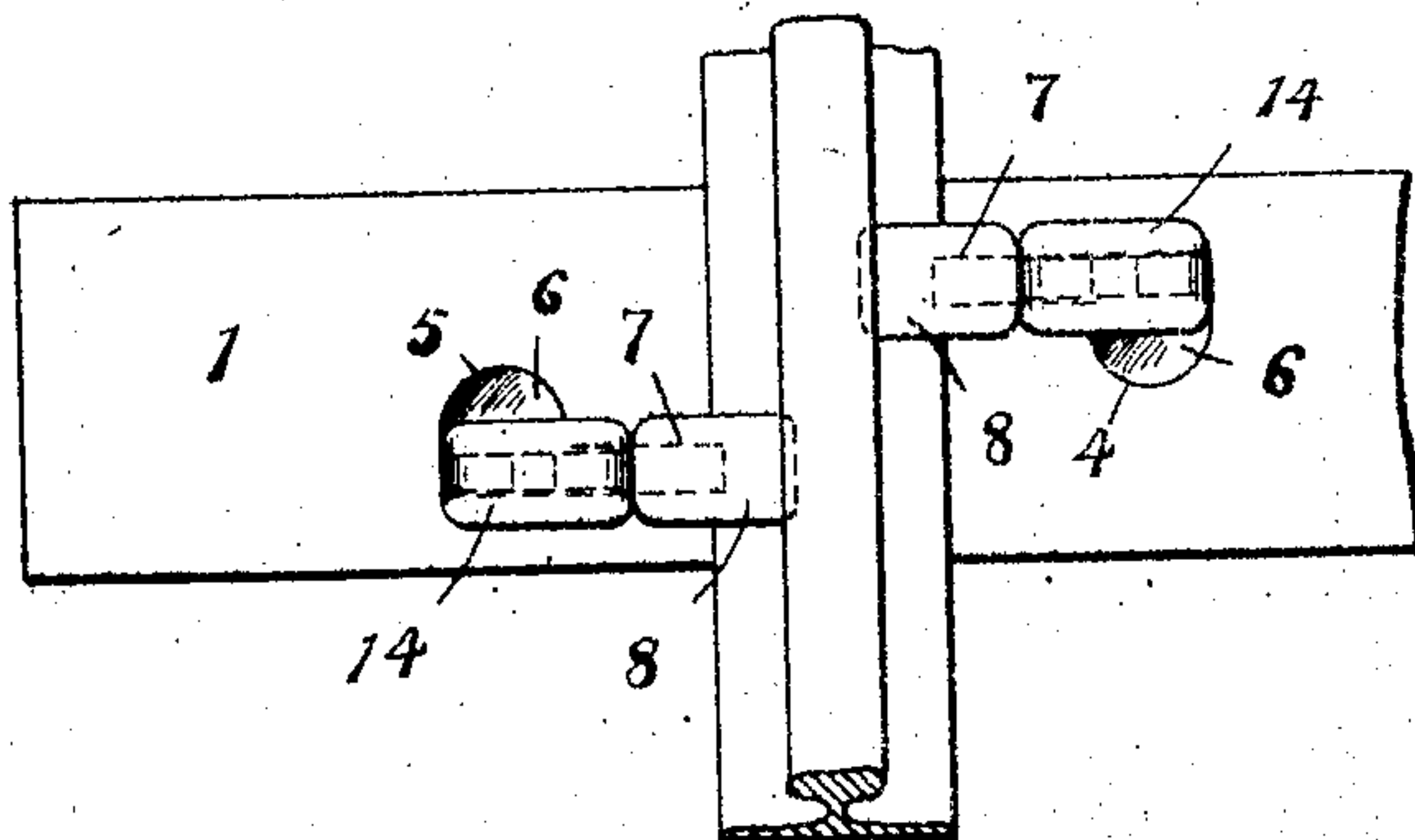


Fig. 1.

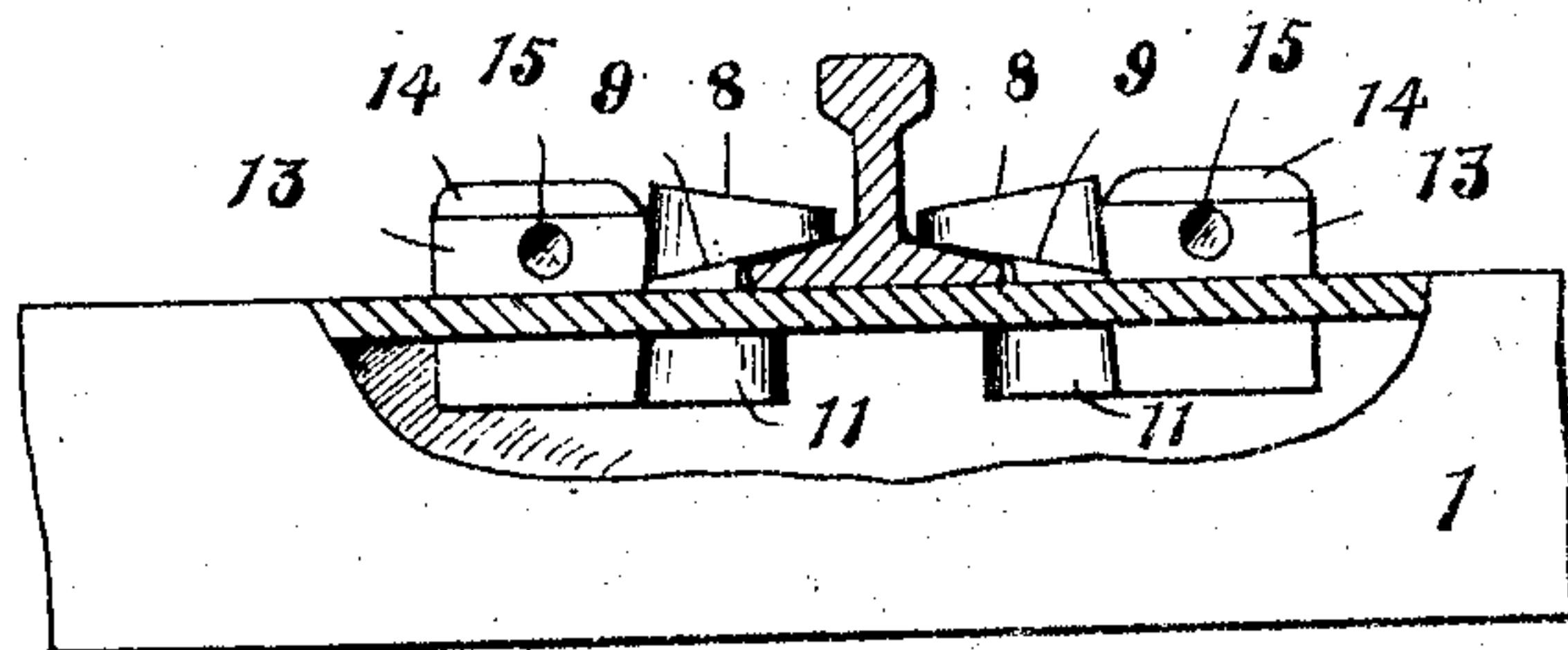


Fig. 2.

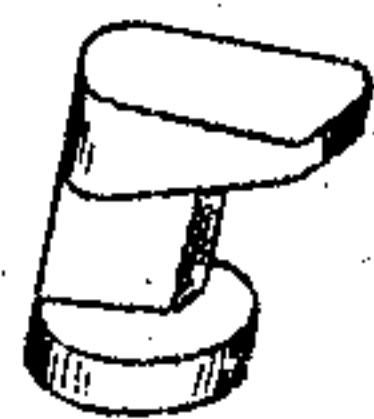


Fig. 3.

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RAILWAY-TIE AND RAIL-FASTENING MEANS.

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To all whom it may concern:

Be it known that I, JOHN JOSEPH O'DONNELL, a citizen of the United States, residing at Biwabik, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Railway-Ties and Rail-Fastening Means, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in metallic railway tie and rail fastening means.

One object of my invention is to provide a tie of this character, whereby the rail and its fastening means are readily applied from the upper face of the tie, and in which the rail is securely fastened to the tie.

A still further object of my invention is to provide a tie in which the rails can be adjusted inwardly or outwardly as the occasion may call for, as is often the case.

In the accompanying drawings, Figure 1, is a top plan view of a tie showing my improved tie fastener holding the rail thereon. Fig. 2, is a side elevation partly in section of Fig. 1. Fig. 3, is a perspective view of one of the rail engaging dogs.

Referring to the drawings, 1 represents my improved tie which is made of metal and of any desired form. The upper face of the tie at each end is formed with openings 4 and 5, and spaced a distance apart less than the width of the base of the rail, whereby the rail can be shifted inwardly or outwardly as desired, and which is often necessary in the construction of railways, as is well understood by those skilled in the art. The openings 4 and 5 as shown, are of a circular form, as indicated at 6, and have communicating at one side inwardly-extending rectangular openings 7. The inner ends of the rectangular openings, as before stated, are a distance apart considerably less than the width of the base of the rail, whereby the rail can be shifted inwardly or outwardly for straightening the track or for allowing for the variation in the ties and gage of track as on curves.

The rail dog 8 as shown, is formed with enlarged heads, having an inclined lower face, as indicated at 9, which engages the upper face of the rail base and firmly clamps the rail upon the tie. The said dog is provided with a rectangular waist portion 10 of a thickness approximately equal to the width

of the rectangular slot 7 in the tie. The lower end of the dog 8 is provided with an enlarged circular portion 11 which is of a size to freely pass through the circular opening, but too large to pass through the rectangular opening 7. The dog is inserted by passing the portion through the opening 6 until the shank or waist portion 10 is opposite the rectangular opening 7, when the same is moved inwardly until the beveled face 9 engages the rail base. When in this position it will be seen that the portion 11 holds the dog against upward movement. The outer edge of the dog is beveled as indicated at 12. The dog or shank portion thereof is of such a length that it does not nearly extend to the circular opening 6, and leaves a portion of the rectangular opening unfilled. Wedges 13 are placed in the unfilled portion of the rectangular openings, and are driven downwardly engaging the beveled face 12 of the dog, and force it inwardly so that it firmly engages the rail base and clamps the rails on the tie. The wedges are provided with end more readily removed, or if desired, an opening 15 may be formed in the wedge below the enlarged heads 14 for allowing the same to be head.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. The combination with a hollow tie having bayonet slots in its upper face, of a rail supported by the tie, dogs interlocking in said bayonet slots and extending over the base of the rail, and means for locking the dogs in said openings.

2. The combination with a tie having bayonet slots in its upper face, of a rail supported by the tie, dogs having intermediate reduced shank portions entering the slots, and adapted to hold the rail upon the tie, and wedges adapted to be driven in the slots and forcing the dogs inwardly upon the rail.

3. A rail fastening comprising a metallic tie having bayonet slots therein, dogs interlocking in said slots and engaging and holding the base of the rail upon the tie, and wedges driven into the slots between the dogs and the outer ends of said slots.

4. A rail fastening comprising a metallic tie having bayonet slots therein, dogs having intermediate reduced shank portions slidable in the slots and the upper headed portions of the dogs having beveled faces

engaging the rail base and clamping the same upon the tie, and wedges driven into the slots between the outer ends and the dogs for forcing the dogs inwardly.

5 5. A rail fastening comprising a metallic tie having longitudinal rectangular openings, said tie having circular openings intersecting the outer ends of the rectangular openings, dogs having an upper headed portion adapted to engage the rail and a lower
10 headed portion adapted to pass through the circular opening, and a reduced connecting shank portion of angular form and entering the rectangular slot, and wedges driven in
15 the slot on the outside of the dogs.

6. A rail fastening comprising a hollow metallic tie having longitudinal rectangular slots therein, said tie having a circular opening intersecting one side of each slot adjacent
20 its outer end, dogs having enlarged lower ends adapted to pass through the circular openings and having a reduced rectangular shank portion adapted to slide inwardly in the rectangular opening, said dogs
25 having enlarged heads having a lower beveled face, adapted to engage the base of the rail, the rear face of the dogs being beveled, and wedges driven in the openings on the
30 outside of the dogs, and means whereby said wedges may be removed.

7. The combination with a tie having longitudinal openings adjacent its ends, of a rail supported by the tie, said tie having circular openings intersecting the ends of the openings, dogs having upper headed portions having beveled faces to engage the base
35 of the rail and a lower headed portion adapted to pass through the circular openings and engaging the lower face of the tie and reduced connecting shank portions of
40 angular form and entering the rectangular slots and wedges driven in said slots and forcing the dogs against the rail.

8. The combination with a tie having bayonet slots therein, of a rail supported by
45 the tie, dogs interlocking in said slots and adapted to hold the rail thereon, and means for locking the dogs in said openings.

9. The combination with a tie having bayonet-slots therein, of a rail supported by
50 the tie, dogs interlocking in said slots and adapted to hold the rail thereon, and wedges adapted to be driven in the slots and forcing the dogs inwardly upon the rail.

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

JOHN JOSEPH O'DONNELL.

Witnesses:

NORMAN E. LA MEND,
S. GEO. STEVENS.