No. 857,051. PATENTED JUNE 18, 1907.

J. L. GOURLEY.

METALLIC RAILROAD TIE.

APPLICATION FILED MAR 6, 1907.

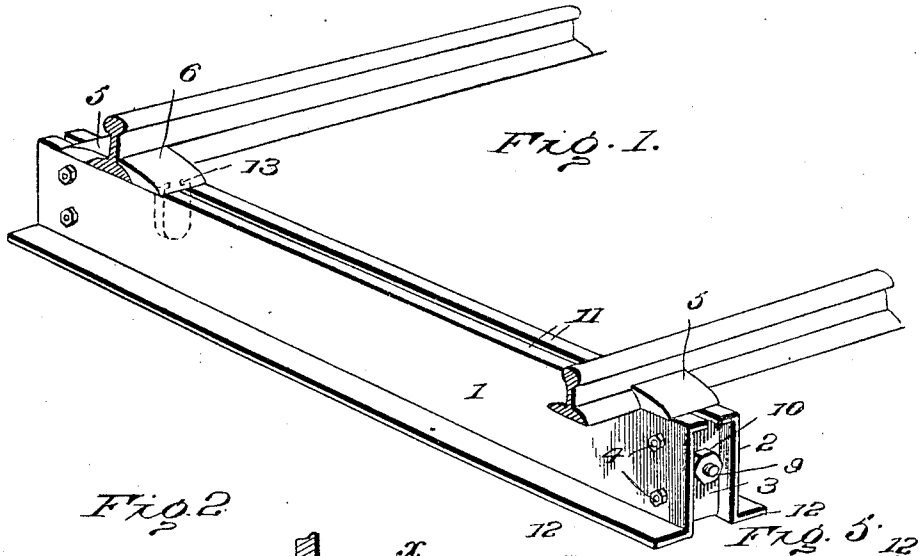


Fig. 1.

Fig. 2.

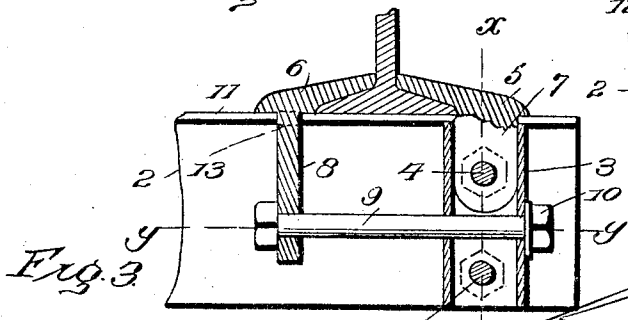


Fig. 3.

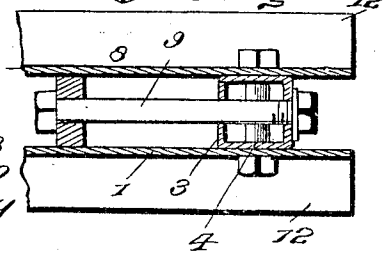
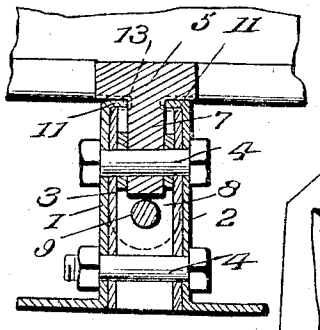


Fig. 5.



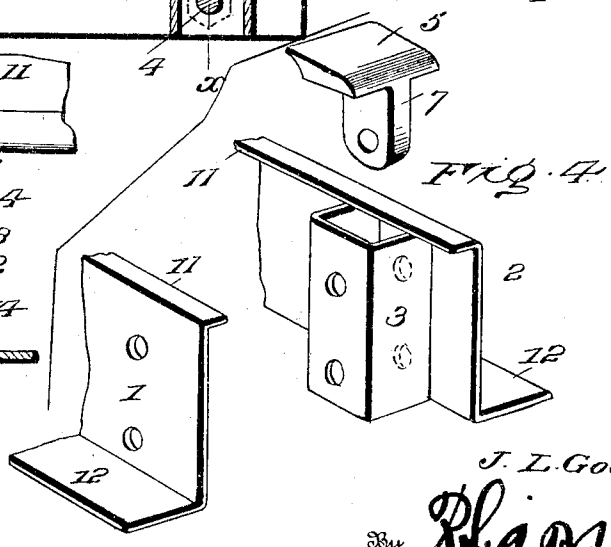


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. GOURLEY, OF UHRICHSVILLE, OHIO, ASSIGNOR OF TWO-THIRDS TO L. S. NICHOLLS AND T. D. HEALEA.

METALLIC RAILROAD-TIE.

No. 857,051. Specification of Letters Patent. Patented June 18, 1907.

Application filed March 6, 1907. Serial No. 360,851.

To all whom it may concern:

Be it known that I, JOHN L. GOURLEY, a citizen of the United States, residing at Uhrichsville, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

The present invention relates to railway ties and has for its object to devise a metallic tie of novel form and rail securing means of peculiar construction, the several parts being of such arrangement as to admit of their assemblage or ready disconnection.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of a metallic railway tie embodying the invention. Fig. 2 is a longitudinal section of an end portion of the tie. Fig. 3 is a transverse section of the tie on the line x—x of Fig. 2. Fig. 4 is a detail perspective view of an end portion of the tie having the parts separated. Fig. 5 is a section on the line y—y of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The tie comprises companion beams or members 1 and 2 arranged in parallelism and spaced apart a given distance. Each of the beams is flanged at its upper and lower edges for strength as well as to secure anchorage in the roadway. Spacing pieces 3 are interposed between opposite end portions of the beams 1 and 2 and preferably consist of hollow blocks formed by bending a sheet metal strip or blank into a hollow square. Bolts 4 connect opposite end portions of the beams 1 and 2 and pass through openings in opposite sides of the spacing pieces. The tie formed as herein disclosed may be of any size depending upon the gage of track and the required haulage thereover.

The means for securing the rails to the tie comprise clips 5 and 6. The outer clips 5 are fixed whereas the inner clips 6 are movable. Each clip 5 has a pendent lug 7 which is apertured to receive the uppermost bolt 4 whereby the clip is held to the tie. It will thus be understood that the upper bolt or fastening 4 serves to connect the beams 1 and 2, to retain the spacing piece 3 in place and to hold the clip 5 to the tie. The inner or movable clip 6 is formed with a pendent lug 8 having an opening through which a bolt 9 passes, said bolt passing through openings in the inner and outer portions of the spacing piece 3. By tightening the nut 10 upon the bolt 9 the clip 6 may be drawn toward the clip 5 and thereby clamp the rail placed between the two clips. By loosening the nut the clip 6 is released and may be moved inward to clear the rail and admit of the latter being removed from the tie or placed in position. The pendent lugs of the clips 5 and 6 enter the space formed between the beams or members 1 and 2.

From the foregoing it will be understood that the tie involves a simple construction which is of such nature as to admit of beams either rolled or cast being devised in the formation of ties. The pieces 3 interposed between the beams while primarily serving to space the beams apart the required distance also provide attaching means for the clips in the manner stated.

By preference, the flanges 11 along the upper edges of the beams 1 and 2 extend inward, whereas the flanges 12 along the lower edges project outward. The ballast of the roadbed resting upon the outer flanges 12, retains the ties in place, whereas the inner flanges 11 serve to inclose a space besides making positive engagement with the adjustable clips 6 to prevent vertical displacement thereof. Notches 13 are formed in opposite edges of the lug 8 to receive the inner flanges 11, thereby serving to direct the clips 6 in their movements and supplementing the action of the bolt 9 in holding the clips in place. The inner flanges 11 also overlap the spacing pieces 3, thereby preventing displacement thereof and enabling lighter bolts 4 to be used.

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

1. A metallic railway tie comprising spaced

members, spacing pieces interposed between said members, a fixed clip, a movable clip, and means for adjusting and securing the movable clip into adjusted position, said means coöperating with the spacing means interposed between the said beams.

2. A metallic railway tie comprising spaced members, means connecting the said members, fixed clips having pendent lugs apertured to receive fastening means connecting the members, movable clips having pendent lugs formed with openings, and fastenings passed through the openings in the lugs of the movable clips adapted to effect adjustment thereof and to secure the movable clip in an adjusted position.

3. A metallic railway tie comprising transversely spaced beams, spacing pieces interposed between said beams, means connecting the beams, fixed clips secured to the beams by the connecting means thereof, movable clips having pendent lugs, and fastening means coöperating with the before mentioned spacing pieces and with the lugs of the movable clips to admit of adjusting the latter and securing the same in the adjusted position.

4. A metallic railway tie comprising transversely spaced beams, a hollow spacing piece arranged between the beams, bolts connecting the beams and the spacing pieces, fixed clips held between the beams by said bolts connecting the beams, clips having pendent lugs extended into the space formed between the said beams, and other bolts passing through the openings in the lugs of the movable clips and other openings in the said spacing pieces to adjust the movable clips and secure the same in an adjusted position.

5. A metallic railway tie comprising transversely spaced beams having inner flanges along their upper edges and outer flanges at their lower edges, spacing pieces between the beams underlapping the upper flanges thereof, bolts connecting the beams and spacing pieces, fixed clips secured to the beams, adjustable clips having pendent portions coming between the beams and having notches in opposite edges of the pendent portions to receive the inner upper flanges of said beams, and fastenings for securing the movable clips to said spacing pieces and serving to draw said clips to clamp the rails between them.

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

JOHN L. GOURLEY. [L. S.]

Witnesses:
C. U. PATTERSON,
J. E. GROVES.