G. C. HAMMETT.

RAIL FASTENING FOR METALLIC TIES.

APPLICATION FILED APR. 17, 1912.

1,032,059. Patented July 9, 1912.

Fig. 1

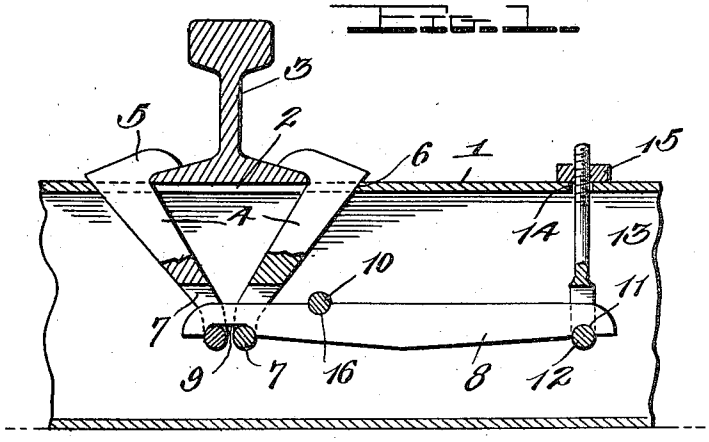


Fig. 2

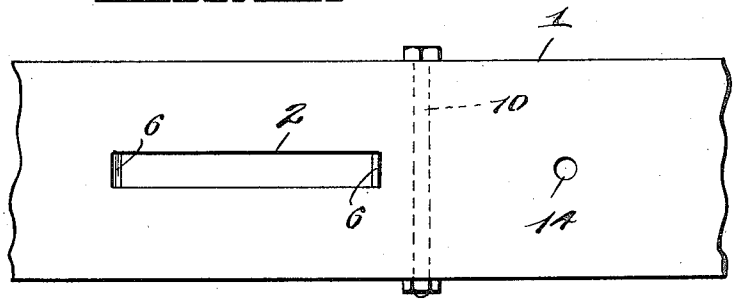


Fig. 4

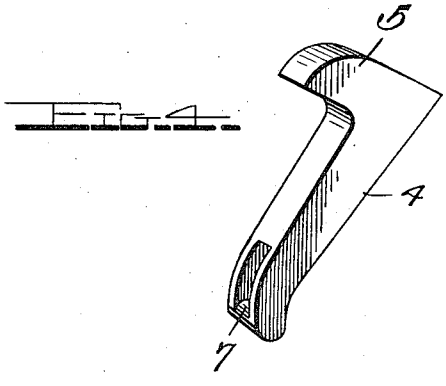
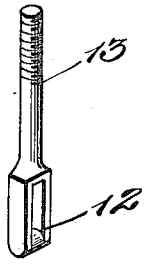


Fig. 3



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RAIL-FASTENING FOR METALLIC TIES.

1,032,059. Specification of Letters Patent. Patented July 9, 1912.

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To all whom it may concern:

Be it known that I, GATHER C. HAMMETT, a citizen of the United States, residing at Corning, in the county of Clay and State of Arkansas, have invented certain new and useful Improvements in Rail-Fastenings for Metallic Ties, of which the following is a specification, reference being had to the accompanying drawings.

This invention comprehends certain new and useful improvements in rail fastening devices and relates particularly to a rail fastener designed for use in connection with metallic ties.

To those versed in the art to which this invention appertains, it is well known that heretofore, it has been the common practice to secure the rails to the metallic ties by relatively short bolts and that owing to the extreme rigidity of such fastening devices, the bolts are liable to be sheared off, particularly on curves where the side thrust of the wheels upon the rails is great.

With a knowledge of these conditions, my invention has for its primary object a simple, durable and efficient construction of rail fastening for metallic ties which will avoid the defects above noted and which will effectively hold the rails in position without any liability of accidental displacement, while at the same time, the device will overcome the rigidity which is a feature incidental to the use of short bolts and which often causes them to break or shear off. And the invention also aims to generally improve devices of this class and to render them more useful and commercially desirable.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which,

Figure 1 is a longitudinal sectional view through a metallic tie showing a rail secured in place thereon by my improved fastening devices. Fig. 2 is a top plan view of the tie, the rail clamps and component parts being omitted. Fig. 3 is a detail view of the tension bolt employed, and, Fig. 4 is a detail view of one of the rail clamps.

Corresponding and like parts are referred to in the following description and designated in the accompanying drawing by like reference characters.

It is to be understood that my invention is applicable for use with metallic ties of any ordinary or conventional type, the accompanying drawing showing a tie of tube or box form for the purposes of illustration. The tie 1 is formed in its top with a slot 2 extending longitudinally thereof and transversely of the rail, the rail 3 being designed to be placed over the slot 2 upon the top of the tie 1 and the slot being of sufficient length that openings will be formed on opposite sides of the base flanges of the rail for the reception of the rail clamps 4.

The clamps 4 are adapted to be slipped downwardly into the openings formed at the ends of the slot 2 on opposite sides of the rail 3 and are formed at their upper ends with hooked lugs 5 that are designed to snugly fit over the side edges of the base flanges of the rail, as best illustrated in Fig. 1. The clamps converge downwardly toward each other and are preferably formed with straight outer or rear edges which engage the beveled end walls 6 of the slot 2, although it is to be understood that the invention is not limited in this regard.

The lower ends of the clamps 4 are formed with eyes 7 through which one end of a tensioning lever 8 is intended to be slipped, said lever being preferably formed in its lower edge with a recess 9 designed to accommodate the cross bars of the eyes of the clamps. The tensioning lever 8 is fulcrumed intermediate of its ends within the tie 1, the fulcrum, in the present embodiment of the invention, consisting of a transversely extending rivet 10, as clearly illustrated in Figs. 1 and 2. The longer arm of the lever 8 is preferably recessed on its lower edge, as at 11, and is intended to be engaged at such point with the cross bar of an eye 12 formed in the lower end of a tension bolt 13. This bolt is adapted to be slipped upwardly through an opening 14 formed in the top

of the tie 1 and the upper end of the bolt is threaded for engagement by a tension adjusting nut 15 which is square or otherwise non-circular in form, whereby a socket wrench or other tool may be easily applied thereto for tightening or loosening the nut.

From the foregoing description in connection with the accompanying drawing, the operation of my improved rail fastening for metallic ties will be apparent. In the practical use of the device, after the rail 3 has been placed in position, the clamps 4 are slipped downwardly into the openings formed at the ends of the slot 2, into engagement with the base flanges of the rail, the tensioning lever 8 is slipped underneath the fulcrum 10 and is preferably recessed, as at 16, to engage said fulcrum, the shorter arm of the lever being slipped in through the eyes 7 of the clamps 4 and the longer arm of the lever being engaged with the eye 12 of the tension bolt 13, the upper end of the latter being slipped upwardly through the opening 14 and the required tension of the parts thus accomplished by screwing up the nut 15.

It will thus be seen that I have provided a very simple and efficient construction of rail fastening for metallic ties which will securely hold the rails firmly in position without the use of short bolts and which will thereby overcome the rigidity which often causes such bolts to break or shear off by the side thrust of the rolling stock, particularly in rounding curves.

While the accompanying drawing illustrates what I believe to be the preferred embodiment of my invention, it is to be understood that the invention is not limited thereto, but that various changes may be made in the construction, arrangement and proportions of the parts without departing from the scope of the invention, as defined in the appended claims.

What I claim is:—

1. In a rail fastening of the character described, the combination of a tie formed with a slot and with an opening spaced from said slot, rail clamps designed to engage the base flanges of a rail placed over said slot and to extend downwardly through the ends of the slot, a tensioning lever fulcrumed intermediate of its ends within the tie and having one arm engaging said clamps and adapted to press downwardly thereon, a tension bolt engaging the other arm of said lever and extending upwardly through the opening of the tie, and means connected to said bolt for drawing the same upwardly through the opening, whereby to secure the required tension.

2. In a rail fastening of the character described, the combination of a tie adapted to support a rail and formed with openings designed to be located on opposite sides of said rail, rail clamps adapted to be slipped downwardly into said openings and formed at their upper ends with lugs designed to engage the base flanges of the rail, said rail clamps converging downwardly toward each other and formed at their lower ends with eyes, a fulcrum secured to the tie, a lever mounted in the tie and engaging with its upper edge the said fulcrum, one arm of said lever extending through the eyes of said clamps, and means connected to the tie and to the other arm of said lever for exerting a tension on the latter and the clamps.

3. In a rail fastening of the character described, the combination of a tie adapted to support a rail and formed with openings designed for location on opposite sides of said rail, rail clamps adapted to be inserted down through said openings and arranged at their upper ends for engagement with the base flanges of the rail, said clamps converging downwardly toward each other and formed in their lower ends with eyes, a transversely extending bolt mounted in the tie, a lever mounted in the tie and fulcrumed on said bolt, one arm of said lever extending through the eyes of the clamps, a tension bolt formed at its lower end with an eye with which the other arm of the lever is engaged, the tie being formed with an opening through which said tension bolt extends upwardly, the upper end of the bolt being threaded, and a nut bearing on the top of the tie and working on the threaded end of the bolt.

4. In a rail fastening of the character described, the combination with a tie formed with rail clamp openings, clamps designed for insertion in said openings and formed at their upper ends with rail-engaging means, a tensioning lever disposed within the tie, a fulcrum extending transversely across the tie, the lever engaging said fulcrum with its upper edge intermediate of its ends and engaging the rail clamps at one of its ends and with its lower edge, and means connected to the tie and detachably engaging the lower edge of the lever at its other end for exerting an upward pull on the latter and a downward pull upon the clamp.

5. In a rail fastening of the character described, the combination of a tie formed with rail clamp openings, clamps designed for insertion in said openings and formed at their upper ends for engagement with the base flanges of a rail, the clamps being formed at their lower ends with eyes, a transversely extending bolt secured in the tie, a tensioning lever formed in its upper edge with a recess, engaging said bolt and in its lower edge near the ends of its arms with recesses, one arm of said lever extending through the eyes of the rail clamps, the cross bars of said eyes being located in the

recess of said arm, a tensioning bolt formed with an eye adapted to be slipped over the other arm of said lever with the cross bar of the eye engaging the recess of said arm, the tie being formed with an opening through which the upper end of the bolt passes, the upper end of the bolt being threaded, and a nut bearing on the top of the tie and working on the threaded end of the bolt.

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

GATHER C. HAMMETT.

Witnesses:
CLYDE WOOD,
E. W. LINDSEY.