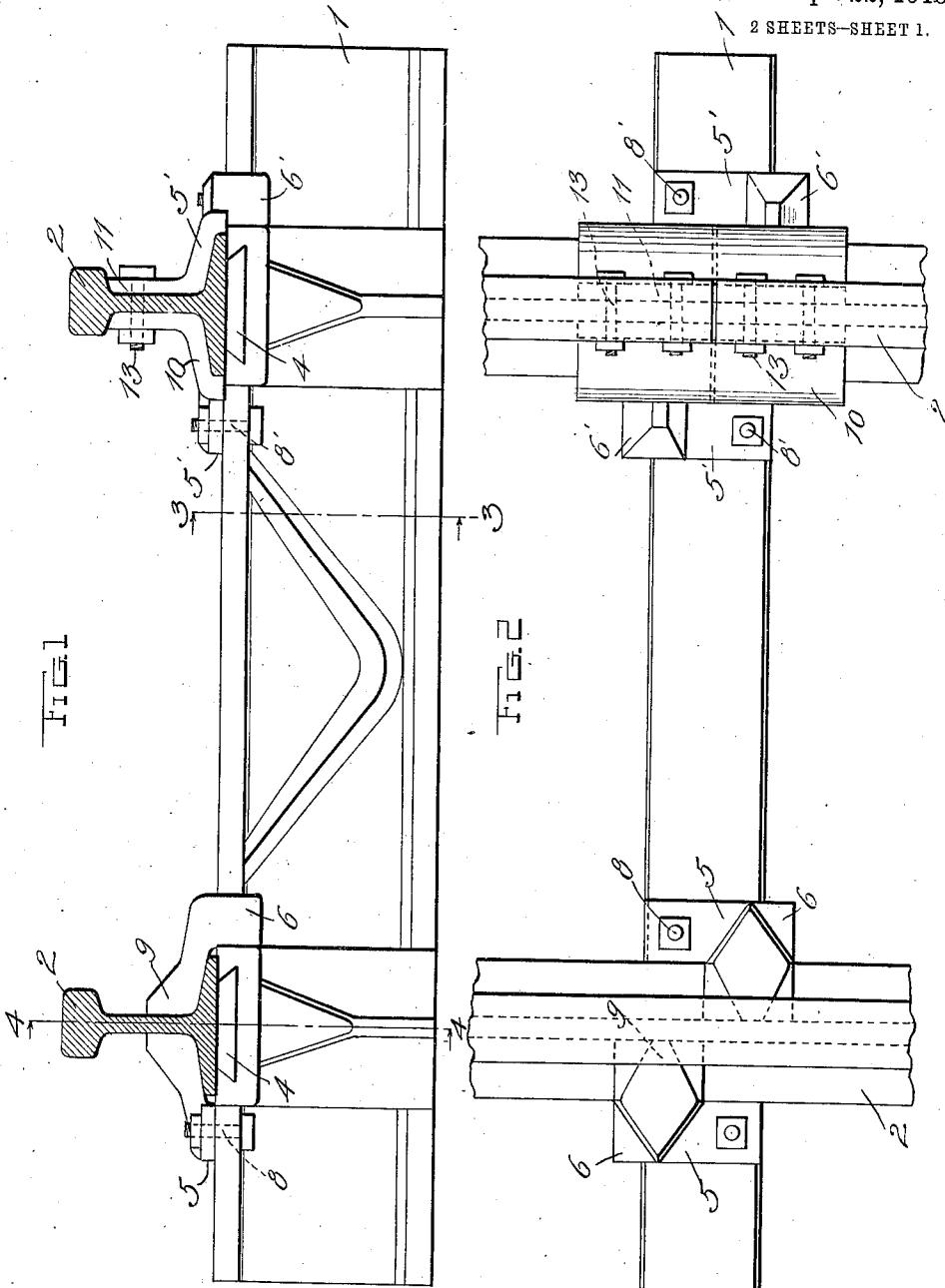


J. O. BECKHAM.
RAILWAY RAIL FASTENING.
APPLICATION FILED AUG. 1, 1912.

1,059,517.

Patented Apr. 22, 1913.

2 SHEETS-SHEET 1.



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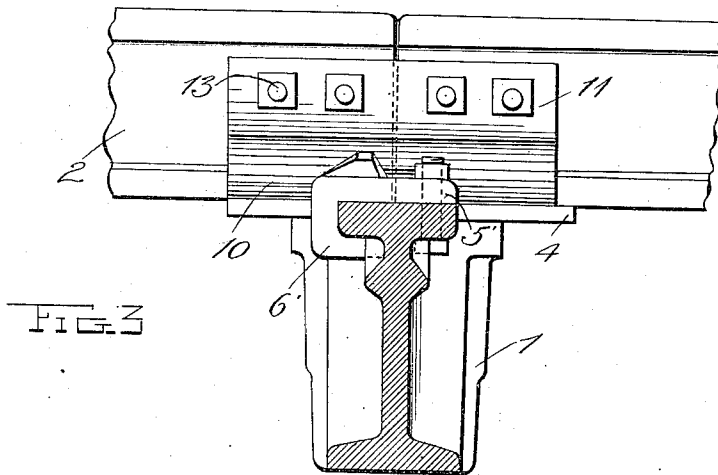


FIG. 3

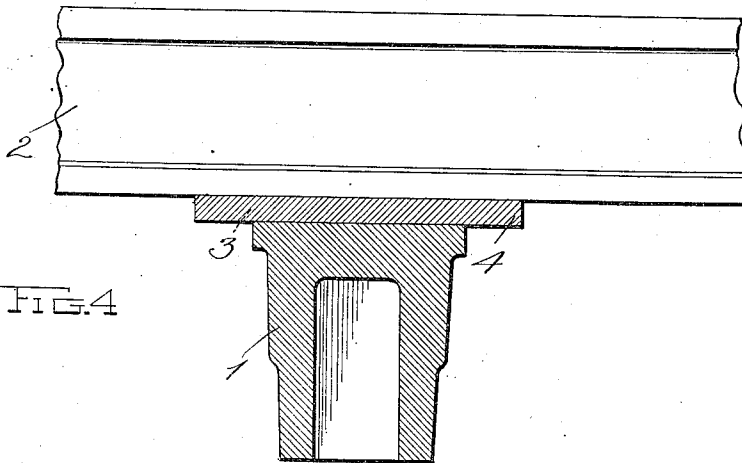


FIG. 4

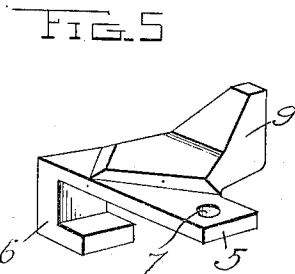


FIG. 5

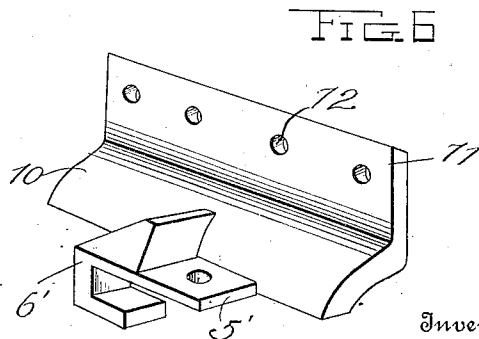


FIG. 6

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RAILWAY-RAIL FASTENING.

1,059,517.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed August 1, 1912. Serial No. 712,746.

To all whom it may concern:

Be it known that I, JAMES OLLIE BECKHAM, a citizen of the United States, residing at Henderson, in the county of Vance and State of North Carolina, have invented certain new and useful Improvements in Railway-Rail Fastenings; and I do 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.

This invention relates to improvements in railway rail fastenings.

One object of the invention is to provide a rail fastening having an improved means for securing the same to a tie and means for firmly engaging and bracing the rail.

A further object is to provide a rail fastening which will be simple, strong and durable in construction, efficient and reliable in operation and which may be quickly applied to and removed from the rail and tie.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings:—Figure 1 is a side view of a railway tie, showing the rail fastened thereto by my improved fastening device; Fig. 2 is a top plan view of the same; Fig. 3 is a vertical cross section, taken on the line 3—3 of Fig. 1; Fig. 4 is a similar view, taken on the line 4—4 of Fig. 1; Fig. 5 is a detail perspective view of one of my improved rail fastenings as constructed for engagement with the rails between the ends or joints thereof; and Fig. 6 is a similar view of the form of fastener employed at the ends or joints of the rail.

Referring more particularly to the drawings, 1 denotes the railway tie and 2 denotes the rails which are fastened thereto by my improved fastening device. The tie 1 is here shown as of I-beam form, the sides of which are thickened or reinforced below the points engaged by the rails and in the upper portion of said reinforced or thickened parts and the top of the rail are transverse dove-tail shaped grooves or channels 3, with which are engaged dove-tail shaped rail supporting blocks 4 of wood or other suitable material which will form a cushion or slightly yielding support for the rails and

which will deaden the noise occasioned by the passage of the rolling stock over the rails. The ends of the blocks 4, preferably, project some distance beyond the ends of the channels 3 and thus form a broad or extended support for the rail.

My improved rail fastening devices comprise tie engaging plates 5, which are adapted to rest on the flanged top of the tie and on one end of said plates are formed L-shaped flange engaging lugs 6. The lugs 6 are engaged with or hooked over the upper flanges of the tie, the lug of the fastening on one side of the rail being engaged with the flange on one side of the tie while the lug of the opposing fastening on the opposite side of the rail is engaged with the flange on the opposite side of the tie, as shown. In the ends of the plates 5 opposite to the lugs 6 are bolt-holes 7, with which are adapted to be engaged bolts 8. The bolts 8 are also engaged with the bolt holes in the top flanges of the tie, thereby firmly securing the fastening devices in operative position for engaging and fastening the rails.

As clearly shown the length of the tie engaging plate 5 corresponds to the width of the upper surface of the ties, and the lower edges of the angle bars 11 which form an integral part of said plates are arranged on a plane with the latter, whereby when the angle bars are properly positioned in respect to the rails the lower edges of the angle bars will be in bearing contact with the ties together with the plates forming a continuation thereof.

In the form of the fastening employed between the ends or joints of the rails, the plates 5 are formed on their upper sides and inner edges, adjacent to the ends having the lugs 6, with upwardly and inwardly projecting rail-engaging lugs 9. The lugs 9 are constructed to conform to the shape of the base flanges and webs of the rails with which they are engaged, said lugs firmly fastening the rails to the tie and forming an efficient brace, whereby the rails are prevented from spreading or upsetting.

The rail fastenings employed at the ends or joints of the rails have their tie engaging portions constructed in the same manner as the tie engaging portions of the intermediate fastening devices hereinbefore described, and said tie engaging portions comprise a plate 5' having on one end L-

shaped tie engaging lugs 6' and in their opposite ends bolt-holes to receive fastening bolts 8' by means of which this form of fastening device is firmly secured to the tie.

5 On the inner edges of the plates 5' are formed upwardly-projecting rail-engaging members, which extend for a considerable distance beyond the ends of the plates 5' and comprise flange engaging portions 10. The

10 flange engaging portions 10 are adapted to fit over and closely engage the base flanges of the rail, and on the portions 10 are formed fish plates or angle bars 11. The fish plates or angle bars 11 are adapted to engage the

15 webs of the rail and have therein a series of bolt holes 12, which register with the bolt holes in the ends of the rails and are adapted to receive fastening bolts 13, whereby the ends of the rails are securely bolted to and

20 between the rail engaging portions of the fastening devices.

By constructing and arranging my improved rail fastening devices as herein shown and described, it will be seen that the

25 rails when fastened to the ties by said devices will be securely held in place and braced against spreading or upsetting.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the

30 invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed. 35

Having thus described my invention, what I claim is:—

In combination with a metallic tie having 40 an upper flanged portion, of a tie engaging plate having in one end a bolt hole, an offset inwardly projecting tie engaging lug on the opposite end of said plate for binding engagement with one edge of the tie, a 45 fastening bolt adapted to be passed through the bolt hole in the plate and through the opposite edge of the tie, a lug forming a part of the plate and projecting upwardly therefrom, and an angle bar forming an 50 integral part of said plate and lug, the lower edge of the angle bar being on a plane with the lower tie engaging surface of the plate, whereby when the rails are connected the same will be securely connected and 55 properly supported upon the ties.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES OLLIE BECKHAM.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."