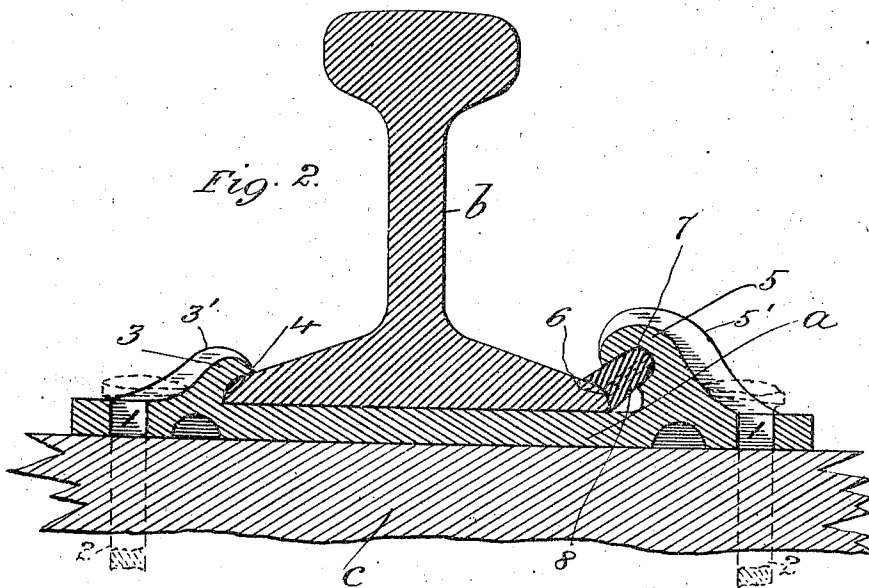
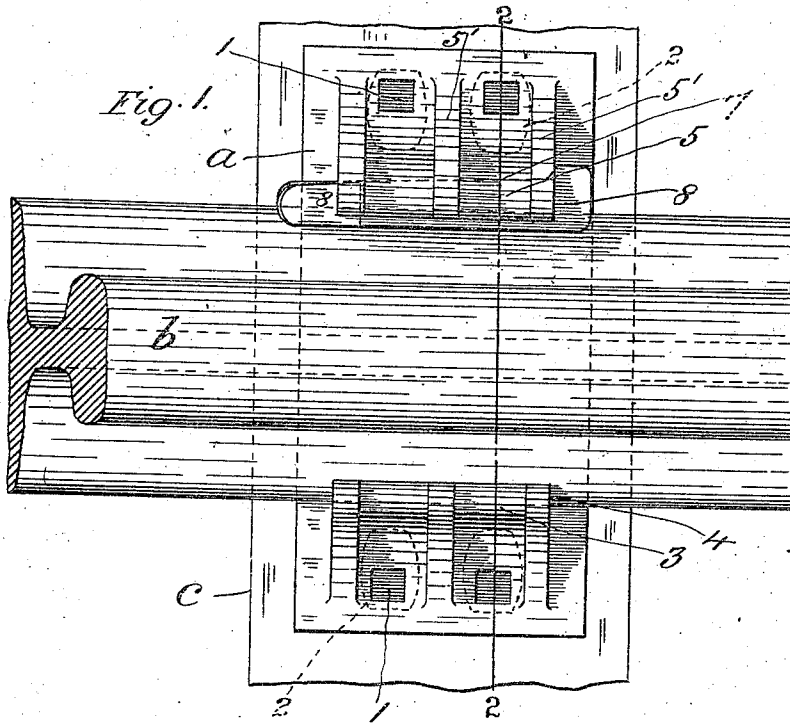


J. B. BARNES.
RAILWAY RAIL FASTENER.
APPLICATION FILED JAN. 21, 1910.

963,031.

Patented July 5, 1910.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSHUA B. BARNES, OF HOT SPRINGS, ARKANSAS.

RAILWAY-RAIL FASTENER.

963,031.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed January 21, 1910. Serial No. 539,373.

To all whom it may concern:

Be it known that I, JOSHUA B. BARNES, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented a new and useful Improvement in Railway-Rail Fasteners, of which the following is a specification.

My invention relates to a combined tie-plate and chair for a railway rail, and has for its object to firmly secure the rail to the tie-plate independently of the tie fastenings.

It consists in features of novelty as hereinafter described and claimed, reference being had to the accompanying drawing forming part of this specification, whereon,

Figure 1, is a top plan view of my improved combined tie-plate and rail chair, and Fig. 2, a vertical transverse section thereof to enlarged scale on line 2, 2, in Fig. 1.

Like letters and numerals of reference denote like parts in all the figures.

a represents a railway tie-plate, which is preferably composed of malleable iron and adapted to support the rail *b*, the tie-plate *a* having perforations 1 therethrough for the passage of the spikes 2 (indicated by dotted lines) by which it is secured to the tie *c* independently of the rail *b*.

On the tie-plate *a* at the outside of the rail *b* is formed a lug 3 which is adapted to overlap and engage the adjacent longitudinal edge portion 4 of the base or flange of the rail *b*, and on the tie-plate *a* opposite to the lug 3, at the inner side of the rail *b* is formed a similar lug 5 which is parallel to the adjacent longitudinal edge portion 6 of the base or flange of the rail *b* at a suitable distance therefrom, the lugs 3 and 5 being preferably integral with the tie-plate *a* and having preferably strengthening ribs 3' and 5' respectively.

Along the inner face of the lug 5 for its entire length, above the tie-plate *a* is formed a horizontal recess or key-way 7 having its two opposite, and preferably tapered, sides inclined at a suitable angle to the plane of the tie-plate *a*, and its rear wall, which is preferably rounded, tapered longitudinally from end to end of the lug 5. Within the key-way 7 is adapted to be inserted a correspondingly shaped key 8 having its inner longitudinally tapered edge in engagement with the correspondingly tapered rear wall of the key-way 7 and its outer edge which

projects beyond the longitudinal opening of the latter, adapted to fit and bear upon the longitudinal edge portion 6 of the base or flange of the rail *b*, whereby when the rail *b* is assembled with its edge portion 4 in engagement with the lug 3, on driving home the key 8 in the key-way 7, the base or flange of the rail *b* is forced into closer engagement with the lug 3, and at the same time firmly tightened on the tie-plate *a* by the constraining pressure of the key 8 at its engagement with the edge portion 6 of the rail base, the key 8 being preferably split longitudinally for a suitable distance from its small end (as indicated by the dotted line in Fig. 1) and the divided parts spread outward for holding the key 8 in place when home. Or other suitable means, auxiliary to its tapered sides, may be used for preventing loosening of the key 8. It is here also noted that the space or clearance on the tie-plate *a* between the rail *b* and lug 5 enables the rail *b* to be assembled or removed from the chair formed by the lugs 3 and 5.

By the above construction, outward tilting of the rail *b* about the lug 3 as a pivot is prevented; also, by fixing the tie-plate *a* to the tie *c* by the spikes 2, which are clear of and independent of the fastening of the rail *b* to the tie-plate *a*, chafing and loosening of the spikes and lateral movement are prevented, while greater pulling resistance is imparted to the spikes by their increased distance from the center of the rail. Furthermore, by the use of my improved rail fastener, in case of breakage of a rail, its broken sections are held in alinement and a wreck of the cars and consequent loss of life and property thereby averted.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A railway rail fastener, consisting of a tie-plate adapted to support the rail, a lug integral with the tie-plate and adapted to engage the rail-base at one side thereof, a lug integral with the tie-plate adjacent and parallel to the other side of the said base, and having a longitudinal tapered slot in its inner face transversely inclined to the tie-plate, the said lugs being opposite to each other, and a key adjustable longitudinally in the said slot and adapted to bear along its outer edge on the said base for the entire length of the said face, substantially as described and for the purpose set forth.

2. A railway rail fastener, consisting of a

tie-plate adapted to support the rail, a lug on the tie-plate adapted to engage the rail-base at one side thereof, a lug on the tie-plate adjacent and parallel to the other side of the said base, and having a longitudinal tapered slot in its inner face transversely inclined to the tie-plate, the said lugs being opposite to each other, a key adjustable longitudinally in the said slot and adapted to bear along its outer edge on the said base for the entire length of the said face, and means for fixing the tie-plate to the tie, substantially as described.

JOSHUA B. BARNES.

Witnesses:

C. W. FRY,
I. H. HAMLET.