

No. 648,189.

Patented Apr. 24, 1900.

A. BURMEISTER.  
METALLIC RAILWAY TIE.

(Application filed Nov. 6, 1899.)

(No Model.)

Fig. 1.

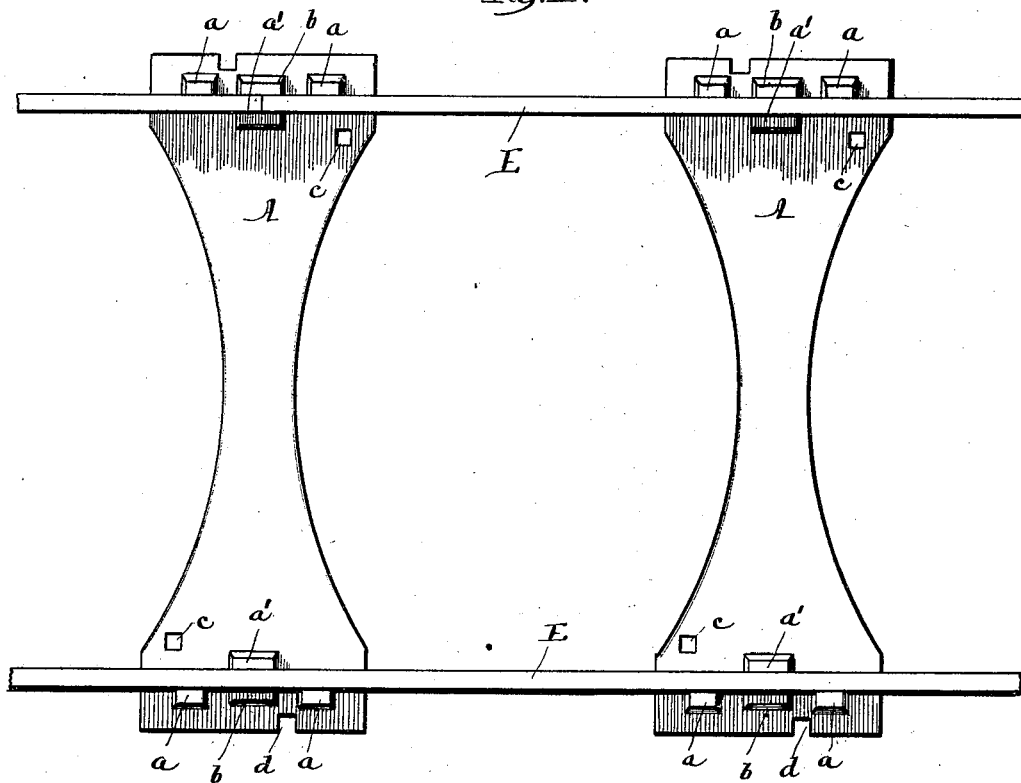


Fig. 2.

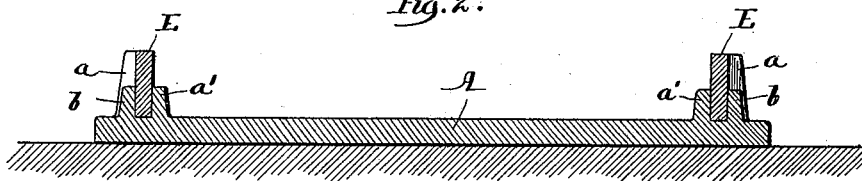
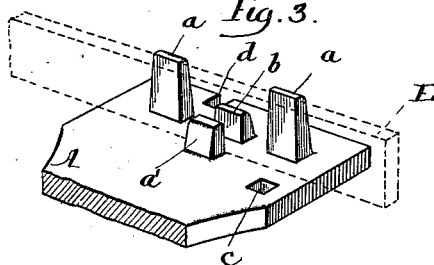


Fig. 3.



Witnesses:

Fred Gulack  
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# UNITED STATES PATENT OFFICE

ALEXIS BURMEISTER, OF FORT MADISON, IOWA, ASSIGNOR OF TWO-THIRDS  
TO IRA B. LESH, OF SAME PLACE, AND CHARLES M. HEWITT, OF CHICAGO,  
ILLINOIS.

## METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 648,189, dated April 24, 1900.

Application filed November 6, 1899. Serial No. 735,889. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXIS BURMEISTER, a resident of Fort Madison, in the county of Lee, State of Iowa, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a full, clear, and exact description.

The present invention has for its object to provide an improved construction of railway-tie especially designed for use in the laying of portable tracks; and the invention consists in the novel tie hereinafter described, illustrated in the accompanying drawings, and particularly defined in the claims at the end of this specification.

Figure 1 is a plan view of a portable railway-track embodying my invention. Fig. 2 is a view in central vertical section through one of my improved railway-ties. Fig. 3 is a perspective view of one end of one of the ties.

In the laying of temporary railway-tracks it is highly important that the construction of ties and rails of which the track is composed shall be such that the different parts composing the track can be readily laid in place and removed and that the use of machine-work in forming the parts and the use of bolts, fish-plates, or the like in securing the parts together shall be avoided.

My present invention affords a construction of metallic cross-tie by the use of which a temporary railway-track can be quickly built without the necessity of machine-work in the construction of the parts, or without the need of fish-plates, bolts, or the like for holding the parts together.

A designates a metallic cross-tie embodying my invention. This cross-tie, which is made, preferably, of cast-iron, (malleable iron or pressed steel might be used,) is of flat plate-like shape, the end portions of the tie, which serve to support the rails, being preferably considerably broader than the central or body portion of the tie. Each end of the tie has formed integral therewith two vertical outer guard-lugs *a* and an inner guard-lug *a'*. An additional outer guard-lug *b* is also shown, although this guard-lug is not essential except for ties that are used beneath the abutting ends of the rails, as illustrated

at the upper left-hand portion of Fig. 1 of the drawings. Preferably each of the ties *A* is formed with holes *c* and *d*, which enable the tie to be readily staked in position where this is deemed desirable. The outer guard-lug *a* and inner guard-lug *a'* are arranged so close together as to engage the webs or bodies of the rails *E*, that will be formed, preferably, of flat merchant bar iron or steel. In practice the bars comprising the rails are simply dropped between the lugs *a*, *a'*, and *b* after the ties have been laid at proper distances apart. For the sake of uniformity all the ties may be formed with the outer central lug *b*, as the expense of this lug is inconsiderable, although, as already stated, the central lug may be omitted except where joints occur between the ends of the track-rails. Thus, for example, at the upper left-hand portion of Fig. 1 of the drawings the abutting ends of two track-rails *E* are shown, these ends falling between the central guard-lugs *a'* and *b* of the tie and being held by said lugs against lateral movement. The outer guard-lugs *a* may be as high as the top of the rails *E*; but the inner lugs *a'* are sufficiently short to avoid contact with the flanges of the car-wheels. When the rails *E* are set between the guard-lugs of the cross-ties, as above described, they are securely engaged and held by the lugs against lateral movement and a very rigid track is provided, and this too without the use of bolts or fish-plates or stringers or other means than the guard-lugs for holding the parts together.

In practice I have found that one man can readily lay the track or take it up and move it, as each tie and each rail can be moved independently.

The simplicity of my improved track, its cheapness, and the readiness with which it may be laid or removed commend its use in a large variety of situations where temporary tracks are employed. By forming the body of the tie *A*, as I prefer to do, with a reduced central portion and expanded ends, a broad bearing is afforded beneath the rails, while the central portion of the tie affords sufficient strength to resist the strains to which such part of the tie is subjected.

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

1. A metallic cross-tie having at its ends  
5 and formed integral therewith the outer lugs *a*, *a* and inner lugs *a'*, the lugs at each end of the cross-tie being arranged sufficiently near together to engage the webs or bodies of the rails E and hold them against lateral  
10 movement but not against vertical movement, the inner lugs *a'* terminating at a distance below the top of the rails E to avoid contact with the wheel-flanges.
2. A metallic railway having at its ends  
15 and formed integral therewith the vertical outer guard-lugs *a*, *a* and the vertical inner intermediate guard-lugs *a'*, said inner lugs being considerably shorter than said outer guard-lugs and both said inner and outer  
20 guard-lugs being arranged sufficiently near together to engage the bodies of the rails and hold them in vertical position against lateral movement, but not against vertical movement.
- 25 3. A metallic railway cross-tie having at

its ends and formed integral therewith the vertical outer guard-lugs *a*, *a* and *b* and the vertical inner intermediate guard-lugs *a'*, said intermediate guard-lugs *a'* extending opposite said guard-lugs *b* and said inner and  
30 outer lugs being arranged sufficiently near together to engage the webs or bodies of the rail and hold the same against lateral movement but not against vertical movement and said inner lugs *a'* being sufficiently short to  
35 avoid contact with the car-wheel flanges.

4. A temporary railway-track comprising rails E having bases and body portions of uniform width in combination with metallic cross-ties having at their ends and formed in-  
40 tegral therewith outer and inner lugs arranged at a distance apart corresponding substantially to the width of the bodies of the rails E and adapted to receive said rail-bodies and hold them against lateral movement.

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Witnesses:

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