

(No Model.)

R. FORSYTH.
METALLIC RAILWAY TIE.

No. 411,959.

Patented Oct. 1, 1889.

Fig. 1.

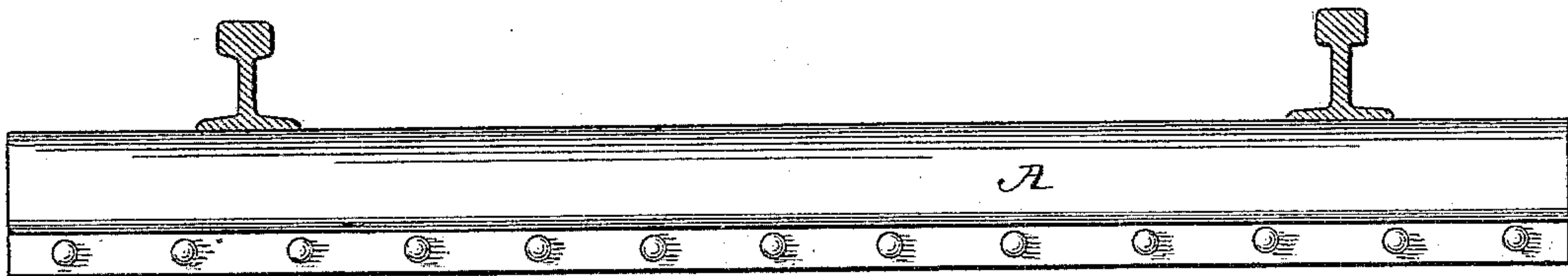
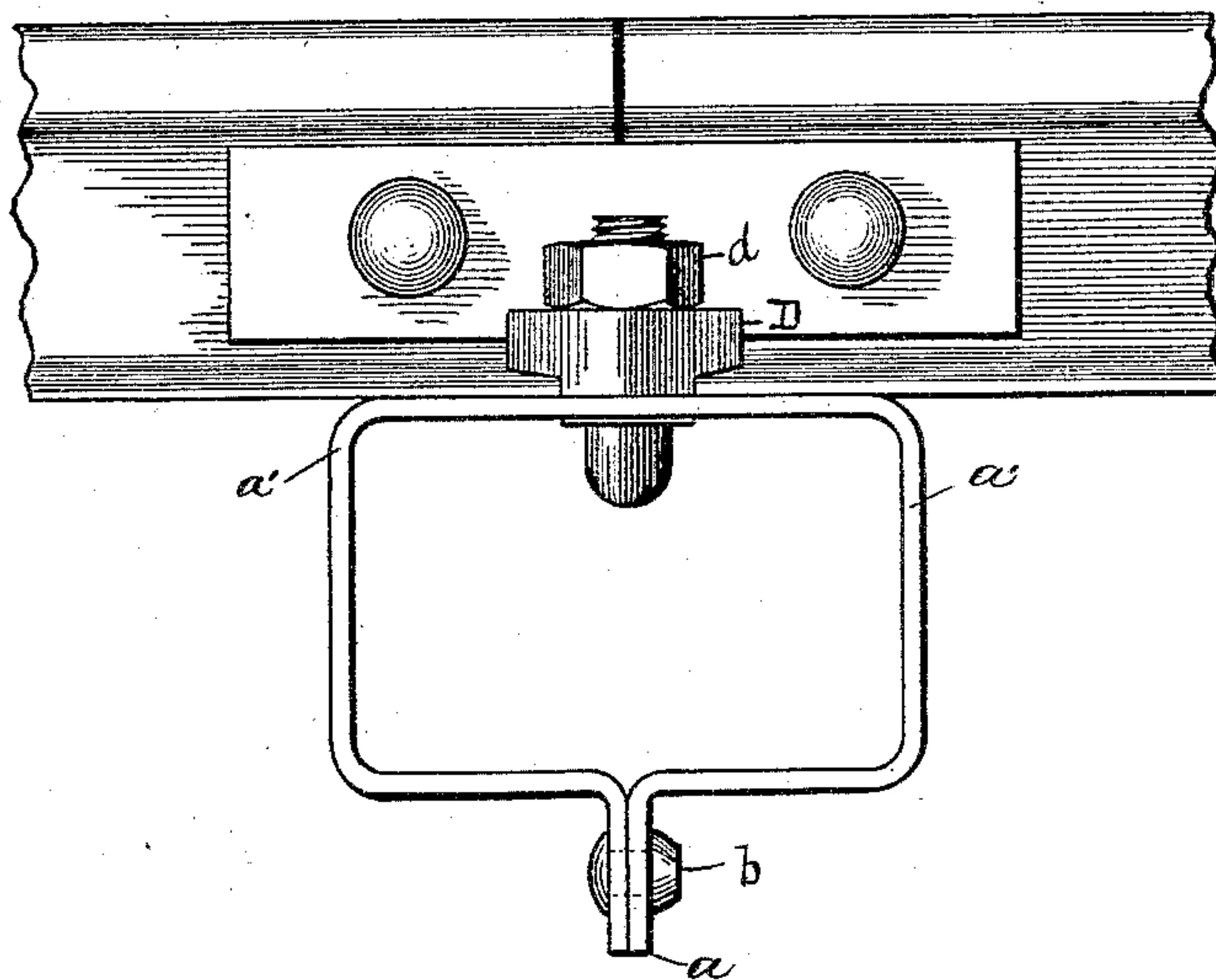


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT FORSYTH, OF CHICAGO, ILLINOIS.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 411,959, dated October 1, 1889.

Application filed March 13, 1889. Serial No. 303,103. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FORSYTH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Metallic Railway-Ties, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention has for its object to provide an improved construction of metallic railway-tie; and my invention consists in a novel construction of metallic tie, hereinafter described, illustrated in the accompanying drawings, and particularly defined in the claims at the end of this specification.

Figure 1 is a view in side elevation of a metallic tie made in accordance with my invention, the railway-rails being shown in cross-section upon the tie. Fig. 2 is an end view of my improved tie and portion of a rail, one form of device for connecting the rail to the tie being also illustrated.

The body A of the tie is formed from a single plate of steel of suitable thickness (say one-third of an inch, more or less,) bent in the direction of its length to form the hollow four-sided box. The abutting edges of the plate are preferably bent outward to form the flanges a, adapted to receive the rivets b, and as well also to strengthen the tie. By preference these flanges a are arranged at the bottom side of the body A, in order that they may be firmly embedded in the ballast of the roadway, and thus serve to guard the tie against danger of lateral displacement. It is preferred, also, to form the body of the tie with the corners rounded, as at a', or beveled, if desired, so that under the jar and strain of passing trains a slight lateral as well as a vertical strain will be thrown upon the sides of the body, the yield of which will give an elasticity of action that

will save the cars from the rough motion experienced in using metallic ties as heretofore constructed. From this construction it will be seen that by forming the tie from a metallic plate bent to box-like form in the direction of its length and without transverse joint a strong, cheap, and durable tie is secured, which will have the desired degree of elasticity.

A further advantage incident to my improved construction of tie is that it affords a ready means for bolting the rails in position thereon. Thus, for example, if a U-shaped bolt, such as shown in the drawings, be employed in connection with suitable clamp D and nuts d, the bolts can be readily set to position through the open ends of the tie.

It will be understood that the skilled mechanic can vary the precise construction above defined without departing from the spirit of the invention, as, for example, by forming the corners a' more or less abrupt, by forming the walls of the body irregular or corrugated, instead of straight and plain, as shown, or in other ways.

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

1. A metallic railway-tie formed from a single plate bent to box-like shape and having its abutting edges provided with the flanges bent in the same direction from the body of the metal and bearing against each other, substantially as described.

2. A metallic railway-tie formed of a plate bent to box-like shape and having its abutting edges flanged and projecting downwardly from the lower side of the tie, substantially as described.

ROBERT FORSYTH.

Witnesses:

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